

**IN THE UNITED STATES DISTRICT COURT  
FOR THE EASTERN DISTRICT OF TEXAS  
TEXARKANA DIVISION**

HITACHI MAXELL, LTD.,

*Plaintiff,*

v.

HUAWEI DEVICE USA INC. and HUAWEI  
DEVICE CO., LTD.,

*Defendants.*

Case No. 5:16-cv-00178-RWS

LEAD CASE

**JURY TRIAL DEMANDED**

HITACHI MAXELL, LTD.,

*Plaintiff,*

v.

ZTE CORPORATION and ZTE USA INC.,

*Defendants.*

Case No. 5:16-cv-00179-RWS

**JURY TRIAL DEMANDED**

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**PLAINTIFF HITACHI MAXELL, LTD.'S  
OPENING CLAIM CONSTRUCTION BRIEF**

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Plaintiff Hitachi Maxell, Ltd. (“Maxell”) provides this brief regarding the parties’ proposed constructions of certain disputed claims terms in the following asserted patents:

<b>Patents asserted against ZTE<sup>1</sup></b>	<b>Patent asserted against Huawei<sup>2</sup></b>
U.S. Patent Nos. 5,396,443 (“the ’443 Patent”), 6,329,794 (“the ’794 Patent”), 6,408,193 (“the ’193 Patent”), 6,758,317 (“the ’317 Patent”), 6,816,491 (“the ’491 Patent”), 8,098,695 (“the ’695 Patent”), 8,339,493 (“the ’493 Patent”), 8,736,729 (“the ’729 Patent”)	U.S. Patent Nos. 5,396,443 (“the ’443 Patent”), 6,754,440 (“the ’440 Patent”), 6,856,760 (“the ’760 Patent”), 6,928,292 (“the ’292 Patent”), 7,116,438 (“the ’438 Patent”), 7,203,517 (“the ’517 Patent”), 7,509,139 (“the ’139 Patent”), and 7,671,901 (“the ’901 Patent”)

## I. INTRODUCTION

The asserted patents represent significant improvements across core technologies of modern mobile devices. These technologies include power management, GPS and mapping functions, audio processing, wireless communication, and processing and displaying photographs and videos. While these features are common in smartphones and tablets today, the inventions disclosed in the asserted patents date back to the early 1990s.<sup>3</sup> They are prime examples of inventions developed years before their industry-wide adoption—drastically improving the functionality of mobile devices.

For example, the ’443 Patent, which relates to switching between a power-saving state and a standby state based on usage of the device (such as use of the touchscreen), has a priority date of October 7, 1992. By contrast, the first widespread smartphones with touchscreens were not released until 2007—long after the inventors of the ’443 Patent disclosed their invention.<sup>4</sup> Similarly, the ’292 Patent, which covers using GPS and cellular signals to determine the location of a device, has a priority date of March 17, 2001. Yet, the first PDA with an integrated GPS

<sup>1</sup> “ZTE” refers collectively to all the ZTE defendants.

<sup>2</sup> “Huawei” refers collectively to all the Huawei defendants.

<sup>3</sup> That work continues today. The asserted patents are just a small part of a 5,000-plus worldwide patent portfolio.

<sup>4</sup> See Brian Heater, *A Brief History of the iPhone*, TechCrunch (June 29, 2017), <https://techcrunch.com/gallery/a-brief-history-of-the-iphone/slide/4/>.

receiver—the technological precursor to today’s smartphones—was not released until 2003.<sup>5</sup>

While the claimed inventions of the asserted patents may appear today to be standard, they in fact solved important problems and helped pave the way for the smartphones and other devices we use every day.

Against this backdrop, Maxell’s proposed constructions for the disputed terms follow the canons of claim construction as required by the Supreme Court and Federal Circuit. Maxell’s constructions are consistent with both the intrinsic and extrinsic evidence, and provide meanings that would have been understood by one of ordinary skill in the art at the time of the inventions disclosed in each patent. For the reasons set forth below, Maxell respectfully requests that the Court adopt Maxell’s proposed constructions for the disputed terms addressed herein.

## **II. SUBJECT MATTER OF THE ASSERTED PATENTS**

The asserted patents generally fall into 5 areas of technology: power management (’443 and ’794 Patents); GPS and navigation functionality (’317 and ’292 Patents); audio processing (’491 and ’695 Patents); wireless communications (’193, ’517, ’438, and ’139 Patents); and processing and displaying still and moving image data (’493, ’729, ’440, ’760, and ’901 Patents).

Additional descriptions of the patents are provided in Section IV, which addresses the disputed terms for the particular patents.

## **III. LEGAL STANDARDS**

### **A. General Principles of Claim Construction**

Claim construction is a matter of law, *Markman v. Westview Instr., Inc.*, 517 U.S. 370, 384 (1996), and must always begin with the words of the claim itself. *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312 (Fed. Cir. 2005) (en banc). There is a “heavy presumption that claim terms

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<sup>5</sup> Roger Hibbert, *Garmin iQue 3600 Review*, CNET (Aug. 7, 2003), <https://www.cnet.com/products/garmin-ique-3600/review/>; see *Garmin iQue 3600*, <https://buy.garmin.com/en-US/US/p/177> (last accessed Sept. 22, 2017) (“The iQue 3600 is the first PDA to include integrated GPS technology.”).



are to be given their ordinary and customary meaning” because “the words of the claims themselves . . . define the scope of the patented invention.” *Aventis Pharms., Inc. v. Amino Chems. Ltd.*, 715 F.3d 1363, 1373 (Fed. Cir. 2013).

In the context of claim construction, “ordinary and customary” mean how a person of skill in the art at the time of the invention would have understood the term as it is used in the claim. *Phillips*, 415 F.3d at 1313. Where the ordinary meaning of claim language is readily understood by a person of skill in the art, claim construction “involves little more than the application of the widely accepted meaning of commonly understood words.” *Id.* at 1314.

When necessary to construe a claim, intrinsic evidence is usually dispositive because “it is the single best guide to the meaning of a disputed term.” *Phillips*, 413 F.3d at 1315 (*citing Vitronics Corp. Conceptronic, Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996)). The specification is important, but it is improper to read into the claims specific embodiments and examples that appear in the specification. *Williamson v. Citrix Online, LLC*, 792 F.3d 1339, 1346-47 (Fed. Cir. 2015). This holds even if the specification describes only one embodiment. *Epos Techs. Ltd. v. Pegasus Techs. Ltd.*, 766 F.3d 1338, 1341 (Fed. Cir. 2014). However, courts must be careful not to import limitations from embodiments unless the patentee intended the claim to be so limited, “a claim construction that excludes the preferred embodiment is rarely, if ever, correct.” *SynQor, Inc. v. Artesyn Techs., Inc.*, 709 F.3d 1365, 1378-79 (Fed. Cir. 2013) (quotations omitted).

Intrinsic evidence also may assist in defining a disputed claim term where the patentee acts as a lexicographer in the specification of the patent. *Edwards Lifesciences LLC v. Cook Inc.*, 582 F.3d 1322, 1329 (Fed. Cir. 2009). “To act as its own lexicographer, a patentee must clearly set forth a definition of the disputed claim term other than its plain and ordinary meaning” and

“clearly express an intent to define the term.” *Thorner v. Sony Computer Entm’t Am., LLC*, 669 F.3d 1362, 1365 (Fed. Cir. 2012) (quotations omitted). “It is not enough for a patentee to simply disclose a single embodiment or use a word in the same manner in all embodiments, the patentee must ‘clearly express an intent’ to redefine the term.” *Id.*

It is improper to rely on extrinsic evidence if intrinsic evidence alone resolves ambiguities in a disputed claim term. *Vitronics*, 90 F.3d at 1583. Extrinsic evidence is not preferred because “reliance on the dictionary divorced from the intrinsic evidence risks transforming the meaning of the claim term to the artisan into the meaning of the term in the abstract, out of its particular context, which is the specification.” *Phillips*, 415 F.3d at 1321. Extrinsic evidence “may not be ‘used to contradict claim meaning that is unambiguous in light of the intrinsic evidence.’” *ArcelorMittal France v. AK Steel Corp.*, 700 F.3d 1314, 1320 (Fed. Cir. 2012) (quotations omitted).

#### **B. Principles for Construing Means-Plus-Function Terms**

A claim element expressed as a “means or step for performing a specified function without the recital of structure, material, or acts in support thereof” is referred to as a mean-plus-function (“MPF”) element. 35 U.S.C. § 112, ¶ 6; *Williamson*, 792 F.3d at 1347. Use of the word “means” creates a presumption that the term is an MPF term and that § 112 applies, and a lack of the word “means” creates a presumption that a term is not an MPF term. *Williamson*, 792 F.3d at 1349. A presumption against MPF interpretation can be overcome only if it is shown that a claim term lacks sufficient structure and consists solely of functional terms as understood by one of skill in the art. *Id.* at 1348-49. In determining whether a claim term invokes § 112 ¶ 6, however, “the essential inquiry is not merely the presence or absence of the word ‘means’ but whether the words of the claim are understood by persons of ordinary skill in the art to have a sufficiently definite meaning as the name for structure.” *Id.* at 1348.

Construing an MPF limitation involves multiple steps. “The first ... is a determination of the function of the means-plus-function limitation.” *Medtronic, Inc. v. Advanced Cardiovascular Sys., Inc.*, 248 F.3d 1303, 1311 (Fed. Cir. 2001). “[T]he next step is to determine the corresponding structure disclosed in the specification and equivalents thereof.” *Id.* The second step of identifying corresponding structure is necessary only if a claim term is found to be an MPF term. *See* 35 U.S.C. § 112, ¶ 6; *Williamson*, 792 F.3d at 1351–54.

As with other claim terms, MPF terms should not be limited to a particular embodiment:

After identifying the function of the means-plus-function element, this court looks to the written description to identify the structure corresponding to that function. Identification of corresponding structure may embrace more than the preferred embodiment. A means-plus-function claim encompasses all structure in the specification corresponding to that element and equivalent structures. Because it had adopted an unnecessarily narrow function for the ‘weighing means,’ the district court improperly restricted its search for corresponding structure in the specification. Thus, the district court erroneously overlooked alternative embodiments of the invention. The district court restricted the ‘weighing means’ to the specific cumulative weigh structure of the preferred embodiment. In fact, the specification describes other structure corresponding to the claimed function.

*Micro Chem., Inc. v. Great Plains Chem. Co.*, 194 F.3d 1250, 1258 (Fed. Cir. 1999). “[P]roper application of § 112 ¶ 6 generally reads the claim element to embrace distinct and alternative described structures for performing the claimed function. Specifically, ‘[d]isclosed structure includes that which is described in a patent specification, including any alternative structures identified.’” *Ishida Co., v. Taylor*, 221 F.3d 1310, 1316 (Fed.Cir.2000) (*quoting Serrano v. Telular Corp.*, 111 F.3d 1578, 1583 (Fed.Cir.1997)).

“To determine whether a claim recites sufficient structure, it is sufficient if the claim term is used in common parlance or by persons of skill in the pertinent art to designate structure, even if the term covers a broad class of structures and even if the term identifies the structures by their function.” *Skky, Inc. v. MindGeek, s.a.r.l.*, 859 F.3d 1014, 1019 (Fed. Cir. 2017) (quotations omitted). “[R]equiring the patent to describe precisely how the claimed functions are achieved or

how a person of ordinary skill in the art could make and use the invention goes beyond the threshold trigger for the application of § 112, ¶ 6.” *Collaborative Agreements, LLC v. Adobe Sys. Inc.*, 2015 WL 7753293, at \*7 (N.D. Cal. Dec. 2, 2015).

#### **IV. DESCRIPTION OF THE ASSERTED PATENTS AND THE PROPER CONSTRUCTION OF THE DISPUTED TERMS**

##### **A. The ’443 Patent**

##### **1. Background of the ’443 Patent**

The ’443 Patent, which has a priority date of October 7, 1992, provides a solution to the problem of unnecessary battery drainage that occurs when a mobile device is not in use. In particular, the specification of the ’443 Patent notes that then-existing backlit LCD screens would consume battery power “uselessly” in the circumstance where “the user has left his seat and the electronic equipment has not been in use during a long period of time.” ’443 Patent at 1:44–49. To prevent the useless battery consumption, the ’443 Patent discloses the ability to switch between a power saving state and a non-power saving state, based on the use of the device. As an example, the device may dim or turn off the screen (*i.e.*, enter a power saving state) while not in use. *Id.* at 5:20-30. Conversely, the device may brighten or turn on the screen (*i.e.*, enter a non-power saving state) upon detecting that a user has approached (or touched) the device. *See id.* at 5:30-37, 11:65-12:11. The device also may return to the power saving state if it detects that a user has been distant (or has not touched) the device for a predetermined period of time. *See id.* at 5:38-6:13.

##### **2. Level of Ordinary Skill in the Art for the ’443 Patent**

For the ’443 Patent, a person of ordinary skill in the art would be someone with a working knowledge of power management systems. The person would have gained this

knowledge through an undergraduate Bachelor of Science degree in Electrical Engineering or an equivalent degree, and one year of experience working in the field of power management.<sup>6</sup>

### 3. Disputed Term in the '443 Patent

“a detecting means for detecting whether a user associated medium at least approaches at least part of a housing of said apparatus”

Maxell's Proposed Construction	Defendants' Proposed Construction
<p><b>Function:</b> detecting whether a user-associated medium at least approaches at least part of a housing of said apparatus</p> <p><b>Structure:</b> A sensor, a touch-sensitive surface, or a tablet configured to detect proximity and/or contact using one or more of an electromagnetic induction system, a capacitance system, a capacitive coupling system, a pressure-sensitive resistance system, a transmission pen type ultrasonic system, a surface acoustic wave type ultrasonic system, an optical system, an image sensor, a camera, a microphone, or a temperature sensor, as well as equivalents thereof</p>	<p>This term is written as a means-plus-function</p> <p><b>Function:</b> for detecting whether a user-associated medium at least approaches at least a part of a housing of said apparatus</p> <p><b>Structure:</b> Electromagnetic induction systems, electrostatic coupling system, and Optical system, listed in Table 1; “microphone” (18:8); “temperature sensor” (19:12); “cameras” (Figs. 14 and 15)</p>

The disputed term appears in claim 1 of the '443 Patent. The sole dispute concerning the claimed “detecting means” is the scope of the corresponding structure.

Each of the structures in Maxell's proposed construction is disclosed in the specification of the '443 Patent as a structure for performing the recited function. The '443 Patent associates a sensor with the function of “detecting” and lists several examples of structures for the sensor, including “an image sensor, a microphone or a temperature sensor etc.” '443 Patent at 4:2-6; *see also* '443 Patent at 4:19-23 (describing the role of the sensor in the overall power-saving scheme). The patent discloses that a touch-sensitive surface can be provided on a tablet to detect the approach of a pen or finger. *See id.* at 11:42-46. In particular, Table 1 of the '443 Patent discloses multiple kinds of tablets that can operate as sensors for detecting approach and/or contact. Examples include a “capacitance system tablet” (*id.* at 11:26-27), “pressure sensitive resistance system tablet” (*id.* at 11:27-28), “transmission pen type ultrasonic system tablet” (*id.*

<sup>6</sup> For all of the levels of ordinary skill in the art defined herein, it is understood that additional education or experience may serve as a substitute for the defined requirements.

at 11:28-29), and several others. *See, e.g., id.* at 9:9-17, Table 1, 11:25-30. These structures must be a part of the construction because they are all explicitly listed as structures for performing the recited function.

The patent also describes the capabilities of these sensors. For example, the patent teaches that “the capacitive coupling system tablet can also detect the approach of the pen/finger input medium” (*id.* at 11:34-36) and that “the optical system tablet can detect both the contact and approach of the pen/finger input medium depending on the distance in the height direction from a touch-sensitive surface of an array of sensing and emitting devices ...” (*id.* at 11:36-40).

Maxell’s proposed construction takes into account all the structures disclosed by the ’443 Patent. Defendants’ proposal, however, limits the corresponding structure for the “detecting means” to just a handful of examples while excluding others. Defendants acknowledge that the corresponding structure must include electromagnetic induction systems, optical systems, a microphone, a temperature sensor, and cameras, but they have ignored numerous other examples of the “detecting means” that are provided throughout the patent.

For example, Defendants ignore the “capacitance system tablet,” “pressure-sensitive resistance system tablet,” “transmission pen type ultrasonic system tablet,” and “surface acoustic wave type ultrasonic system tablet” expressly recited in claims 13-19. These claims recite that the “detecting means” is one of these structures, but Defendants read these examples out of their construction for this term. Each of these structures also appears in Table 1 of the ’443 Patent, which all parties agree covers examples of corresponding structures for the “detecting means.”

Only Maxell’s proposal captures all examples of the corresponding structures described in the specification. As such, Maxell’s proposal should be adopted.

## **B. The '440 Patent**

### **1. Background of the '440 Patent**

The '440 Patent, which claims priority to July 5, 1999, is directed to solving the problem of facilitating recording and reproduction of still and moving pictures such that they are stored in a manner which allows for easier searching and reproduction. *See, e.g.*, '440 Patent at 2:5-17. The '440 Patent solves this problem by providing a method whereby a first encoding method (*e.g.*, MPEG) is used to store moving pictures, and a second encoding method (*e.g.*, JPEG) is used to store still pictures. To facilitate easier searching of both types of pictures, thumbnails corresponding to the stored moving pictures and stored still pictures are generated. *See, e.g., id.* at 10:62-11:14.

### **2. Level of Ordinary Skill in the Art for the '440 Patent**

For the '440 Patent, a person of ordinary skill in the art would be someone with a working knowledge of image processing systems. The person would have gained this knowledge through an undergraduate Bachelor of Science degree in Electrical/Computer Engineering, Computer Science, or an equivalent degree, and at least one year of experience working in the field of image processing systems.

### **3. Disputed Term in the '440 Patent**

“still pictures encoded by a second encoding method, and second pictures corresponding to the still pictures and having a smaller number of pixels than the still pictures are recorded”

<b>Maxell's Proposed Construction</b>	<b>Huawei's Proposed Construction</b>
Plain and ordinary meaning	“still pictures encoded by the first encoding method and by a second encoding method, and second pictures corresponding to the still pictures and having a smaller number of pixels than the still pictures are recorded”

Where the ordinary meaning of claim language is readily understood by one of ordinary skill in the art, claim construction “involves little more than the application of the widely accepted meaning of commonly understood words.” *See Phillips*, 415 F.3d at 1314. In these situations, no construction is needed. *U.S. Surgical Corp. v. Ethicon, Inc.*, 103 F.3d 1554, 1568 (Fed. Cir. 1997). That is the situation here. The plain language of the term—“still pictures encoded by a second encoding method, and second pictures corresponding to the still pictures and having a smaller number of pixels than the still pictures are recorded”—is readily understandable and does not require construction.

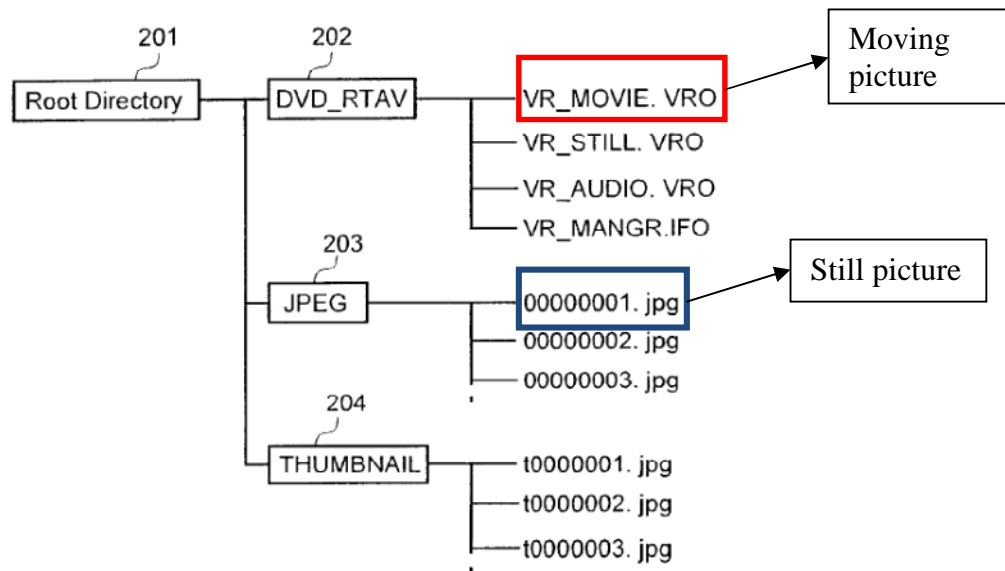
The fact that this term does not require any construction is readily apparent from Huawei’s proposed construction, which parrots the claim language with the exception that Huawei bootstraps an additional limitation into the claim. The following underlined phrase is the only difference between the claim language and Huawei’s proposed construction: “still pictures encoded by the first encoding method and by a second encoding method....”

Huawei’s intentions are clear from its proposal. Huawei is not trying to describe a term for the jury’s understanding—which is not needed—but instead is narrowing the claim by adding another step of encoding for still pictures. This is improper and incorrect. Here, the claim language makes clear that: “moving pictures [are] encoded by a first encoding method” (’440 Patent at 14:48-49) and “still pictures [are] encoded by a second encoding method” (*id.* at 14:43-57). Huawei’s construction would change the claims by imposing the claimed (first) encoding method for moving pictures on the claimed (second) encoding method for still pictures. That is not a claim construction at all, but a claim amendment.

Huawei’s proposed construction is also not correct because it improperly excludes a preferred embodiment disclosed in the ’440 Patent. *See, e.g., Vitronics*, 90 F.3d at 1583 (holding



that a claim construction that results in embodiments of the specification falling outside of the claim scope is “rarely, if ever, correct”). Both Figure 2 and Figure 4 (copied below with annotations) show that a moving picture is recorded with a “.VRO” extension (*e.g.*, first encoding method) and still pictures are recorded with a “.jpg” extension (*e.g.*, second encoding method). *See* ’440 Patent at Figs. 2 and 4; *see also id.* at 10:49-51 (“Numeral 203 is a directory for recording **JPEG data files** for storing compressed **still pictures**”) (emphasis added).



’440 Patent, Fig. 4. Huawei’s construction (or amendment) would exclude this embodiment because it would require the still picture to be encoded in both the first (“.VRO”) and second (“.jpg”) encoding methods. Although what Huawei requires here is described in the specification in other embodiments, it is not a requirement, or even a part of, other embodiments, such as that discussed above. In fact, the specification discloses embodiments in which the reproducing apparatus includes the capability to reproduce one but not both still picture encoding formats. *See, e.g., id.* at 12:61-63. There simply is no requirement for the reproducing apparatus to be able to handle pictures that have been recorded under the moving picture format. This is a requirement Huawei seeks to add through its proposed construction.

Further, Huawei's proposed construction contradicts its own proposal for the term "first encoding method" in the '760 Patent that belongs to the same family and has the same specification as the '440 Patent. There Huawei proposes that the "first encoding method" be defined as a "moving picture encoding method." *See* Joint CC Prehearing Statement at 40. Here, however, Huawei is proposing that the first encoding method be used to encode still pictures as well. Huawei has proposed mutually exclusive constructions in its attempts to amend the claims to engineer non-infringement theories.

The Court should reject Huawei's claim amendments and construe the term with its plain and ordinary meaning. This term needs no further definition and would be readily understood by the jury.

### **C. The '292 Patent**

#### **1. Background of the '292 Patent**

At the time of the '292 Patent, which claims priority to March 12, 2002, it was known that GPS signal strength diminished indoors due to "blockage by ceilings, walls, and the like," preventing the accurate determination of a receiver's position. *See, e.g.*, '292 Patent at 1:30-40. Tall buildings and other outdoor obstructions also prevent a direct view of the sky, thereby reducing "the number of GPS satellites which meet the received signal quality requirements for practical position determination." *Id.* at 1:41-47. Further, while position determination using RF carriers (*e.g.*, cellular) was known, it was recognized at the time that "[i]f a mobile handset is used very near a base station or in a rural or mountainous area where a limited number of base stations exist, the number of base stations which transmit signals that meet received signal quality requirements for practical position determination is low." *Id.* at 1:48-57.

The '292 Patent solves the problems by using both GPS and cellular radio signals to identify the location of a mobile handset. First, the mobile device receives transmissions from

GPS satellites, determines a position of the handset based on the GPS signals, and then calculates the reliability of the determined position. *See id.* at 3:44-59. Next, the mobile handset receives transmissions from cellular base stations, determines a position based on the cellular signals, and then calculates the reliability of the determined position by using, for example, the lowest signal-to-noise ratio among the signal-to-noise ratios received from the cellular base stations. *See id.* at 4:22-35. Finally, the GPS position, the cellular position, the GPS reliability calculation, and the cellular reliability calculation are used to determine an accurate position of the mobile handset. *See id.* at 4:36-56.

## 2. Level of Ordinary Skill in the Art for the '292 Patent

For the '292 Patent, a person of ordinary skill in the art would be someone with a working knowledge of cellular and GPS wireless communications. The person would have gained this knowledge through an undergraduate Bachelor of Science degree in Electrical/Computer Engineering or an equivalent degree, and at least two years of experience working in the field of wireless communications.

## 3. Disputed Terms in the '292 Patent

- a) “GPS receiver means for receiving GPS-oriented signals and generating received GPS signals”

Maxell's Proposed Construction	Huawei's Proposed Construction
<p><b>Function:</b> receiving GPS-oriented signals and generating received GPS signals</p> <p><b>Structure:</b> A GPS receiver 200 and/or components within a mobile handset that receive GPS signals, such as, an antenna and a transceiver or a processor that performs GPS receiving processes as described in Fig. 2 (block 600) and corresponding recitations in the specification as provided below or equivalents thereof. <i>See e.g.</i>, (2:64-65; block 600 in Fig. 2), (3:24-32), (4:65-5:2), (2:53-57), (5:3-7).</p>	<p><b>Function:</b> (1) receiving GPS oriented signals and (2) generating received GPS signals</p> <p><b>Structure:</b> GPS receiver 200, Block 600 in Figure 2</p>

The parties agree that this term is an MPF term and generally agree on the function corresponding to this term. The parties also agree that GPS receiver 200 and Block 600 in Figure

2 include part of the structure that corresponds to the GPS receiver means. But Huawei incorrectly insists this is the only disclosed structure. However, the '292 Patent explains that:

FIG. 1 represents an exemplary structure of a mobile handset that executes the position determination method according to the present invention. A GPS receiver 200 executes the receive operations required for position determination which preferably include: receiving the GPS signals of high/medium frequencies out of the signals received by **an antenna 100; baseband signal modulation; synchronization acquisition; and reception timing calculation**

'292 Patent at 3:24-32 (emphases added); *see also* '292 Patent at 4:65-5:2 (explaining that shared or different antennas may be used for receiving cellular signals). Huawei ignores this and would exclude structures disclosed in the specification.

This disclosure of the '292 Patent makes clear that several structures and/or processing steps are involved in performing the receiving operations and the generation of GPS signals. For example, the GPS receiver 200 in the disclosed mobile handset incorporates an antenna 100 to receive high/medium frequency radio signals from GPS satellites. But Huawei's proposed construction excludes the antenna.

This disclosure also explains that the GPS receiver 200 processes the received high/medium frequency signals to generate the GPS signals by performing additional reception operations that includes at least "baseband signal modulation." *Id.* One of ordinary skill in the art would understand that the disclosed GPS receiver 200 includes a processor that performs the disclosed reception operations of baseband signal modulation in addition to the disclosed antenna 100 that receives the high/medium frequency signals. Braasch Decl. ("Exh. 1") ¶¶ 37-38. Again, Huawei's proposed construction would exclude this disclosed structure.

Further, the '292 Patent makes clear that the invention can be performed by "a single mobile handset," which will necessarily include an antenna to receive radio signals and a

processor the modulates the received radio signals that will correspond to the claimed GPS receiver means. '292 Patent at 5:3-7.

Huawei's proposal would unduly limit the scope of the claims to just a single example disclosed in Figures 1 and 2 of the '292 Patent. Maxell's proposal, on the other hand, captures all the structures and processing operations described in the specification for performing the stated function of receiving GPS-oriented signals and generating received GPS signals. *See Playtex Prods., Inc. v. Procter & Gamble Co.*, 400 F.3d 901, 909 (Fed. Cir. 2005) (“[w]hen looking to the specification for the structure of a § 112 ¶ 6 claim, one must construe the claim in accordance with all the structures disclosed by the inventor. Here the text of the written description clearly describes how the structure of the ‘limiting means’ is broader than the single embodiment depicted in the drawing.”); *see also Acco Brands, Inc. v. Am. Power Conversion Corp.*, 2003 WL 25782757, at \*4 (E.D. Tex. July 16, 2003) (“[w]hen multiple embodiments in the specification correspond to the claimed function, a proper application of § 112, ¶ 6 generally construes the claim element to embrace each of those embodiments.”).

Like the specification in *Playtex Products*, the written description in the '292 Patent discloses structures in addition to the single block 200 that Huawei identifies as the corresponding structure. Yet Huawei does not identify any other structure disclosed in the written description of the '292 Patent. At a minimum, Huawei's construction is technically incorrect because it excludes the disclosed antenna 100. And Huawei's construction does not account for the structure that is required to carry out the disclosed signal modulation, synchronization, and reception timing calculation, *e.g.*, transceiver and/or processor.

Accordingly, the Court should adopt Maxell's proposed construction.

- b) “GPS position calculation means for calculating the mobile handset's position from the received GPS signals and outputting a GPS-based position result”

Maxell's Proposed Construction	Huawei's Proposed Construction
<p><b>Function:</b> calculating the mobile handset's position from the received GPS signals and outputting a GPS-based position result</p> <p><b>Structure:</b> At least one processor, for example, position calculation unit 201 and/or a mobile handset that perform processing functions or equivalents thereof. <i>See e.g.</i>, (2:64-65; block 601 in Fig. 2), (3:24-38), (2:53-60), (5:3-7).</p>	<p><b>Function:</b> (1) calculating the mobile handset's position from the received GPS signals and (2) outputting a GPS-based position result.</p> <p><b>Structure:</b> position calculation unit for GPS 201, Block 601 in Fig. 2</p>

The parties' dispute for this term is similar to the dispute with respect to the “GPS receiver means . . .” discussed above. The parties agree that these terms are MPF terms, and they agree on the function and at least one corresponding structure. But Huawei's proposed construction limits the means to one example provided in the specification, while Maxell's proposal accounts for all the examples and corresponding structure for the claimed means.

For example, the '292 Patent discloses:

**Based on the result of the operations executed by the GPS receiver 200, a position calculation unit for GPS 201 calculates the position** of the mobile handset using the GPS signals and outputs the GPS-based position calculation result 202 to a GPS/cellular positioning results combining unit 400.

'292 Patent at 3:32-37 (emphasis added); *see also* '292 Patent at 2:53-60. Thus, the corresponding structure associated with performing the position calculating function includes at least “a position calculation unit for GPS 201” that performs the disclosed processing or calculating steps.

The '292 patent further explains that these processing steps include at least synchronization acquisition and reception timing measurements for the GPS signals received from the GPS satellites: “the mobile handset executes a receive operation for GPS-oriented signals (hereinafter referred to as GPS signals) 600 including synchronization acquisition and

reception timing measurements required for position determination using GPS.” *Id.* at 2:53-57.

One of ordinary skill in the art would therefore understand that the disclosed position calculation unit for GPS 201 includes a processor that performs the disclosed reception timing calculations to determine the position of the mobile handset.

This disclosure of the ’292 Patent makes clear that the claimed GPS position calculation unit makes a “position determination” based on execution of receive operations, such as “baseband signal modulation; synchronization acquisition; and reception timing calculation.” *Id.* One of ordinary skill in the art would therefore understand that a processor would be a basic component of the disclosed “mobile handset” that is required to “execute[] the receive operations” of baseband signal modulation, synchronization acquisition, and reception timing calculation and, as disclosed by the ’292 Patent, these operations are “required for position determination.” Exh. 1 ¶¶ 39-41; *see also* ’292 Patent at 3:24-32. The ’292 Patent makes clear that the disclosed invention can be performed by “a single mobile handset,” which will necessarily include the processor for executing the disclosed operations. ’292 Patent at 5:3-7.

Huawei’s proposal does not include any structure or processor disclosed in the written description of the ’292 Patent. Instead it focuses only on the drawings and does not account for the structure and processing steps that are required to carry out the disclosed calculation operations that are used for position determination. Accordingly, the Court should adopt Maxell’s proposed construction.

- c) “GPS reliability calculation means for calculating GPS positioning reliability based on the GPS-based position result”

Maxell’s Proposed Construction	Huawei’s Proposed Construction
<b>Function:</b> calculating GPS positioning reliability based on the GPS-based position result <b>Structure:</b> A GPS reliability calculation unit 204 and/or components within a mobile handset that perform processing	<b>Function:</b> calculating GPS positioning reliability based on the GPS-based position result <b>Structure:</b> GPS reliability calculation unit

functions, such as a CPU programmed to execute processing in accordance with the algorithm set forth in the specification, a processor that performs GPS reliability calculation processes described in Fig. 2 (block 602) and corresponding recitations in the specification as provided herein, or equivalents thereof. <i>See e.g.</i> , (2:60-65; block 602 in Fig. 2), (3:38-4:3), (5:3-7).	204, which is insufficient structure because the specification does not disclose the necessary algorithm or flowchart, which renders the term indefinite
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The parties agree that this term is an MPF term and agree on the function corresponding to this term. The parties also agree that the GPS reliability calculation unit 204 includes part of the structure that corresponds to the GPS reliability calculation means. But Huawei incorrectly insists that this is the only disclosed structure.<sup>7</sup>

The specification of the '292 Patent explicitly discloses exemplary techniques for determining the reliability of the GPS-based position result:

The GPS reliability calculation unit 204 calculates the reliability in a manner in which, for example, the number of GPS satellites used when the position calculation unit for GPS 201 calculated the handset position is used as the reliability 205. Alternatively, the quality of the signals received from the GPS satellites used when the position calculation unit for GPS 201 calculated the handset position might be used. ...

By way of illustration, if the received signal quality (for example, the signal-to-noise ratio (SNR) in decibels) is used, the lowest SNR among the SNRs of the signals received from the GPS satellites may be used as the reliability 205. ...

'292 Patent at 3:44-4:3. These sections of the '292 Patent explain that the GPS reliability calculation unit 204 can perform several alternative processing steps to calculate the reliability of the GPS position. These include making a determination on whether the result is reliable based on the number of GPS satellites that have provided the signal.

<sup>7</sup> Maxell also disagrees with Huawei that the '292 Patent does not provide sufficient structure for this term. While Maxell reserves its rights to address Huawei's indefiniteness arguments in its Responsive Claim Construction Brief, Maxell notes that Huawei's position with respect to "insufficient structure" stems from the same incorrect approach that Huawei has taken for each of the means terms of claim 1 of '292 Patent, *i.e.*, identifying only a block from a Figure of the '292 Patent and ignoring the written description of the '292 Patent—an approach that is legally improper. *See Playtex Prods.*, 400 F.3d at 909; *see also Acco Brands*, 2003 WL 25782757, at \*4; *Vulcan Eng'g Co., v. Fata Aluminium, Inc.*, 278 F.3d 1366, 1376 (Fed. Cir. 2002) ("This court has often explained that the claims are construed in light of the specification, and are not limited to a designated 'preferred embodiment' unless that embodiment is in fact the entire invention presented by the patentee").



For example, if the GPS-based position was calculated based on signals received from four GPS satellites, the reliability of the result will be high because signals from multiple sources provided the same result. In an alternative example, the reliability of the GPS position can be calculated using the quality of the signals that have been received from the GPS satellites and/or the signal-to-noise ratio of the various signals. *Id.* For example, if the position was calculated based on a signal that was very noisy, the reliability of the result will be low. Because the '292 Patent also makes clear that the disclosed invention can be performed by "a single mobile handset," which will necessarily include a processor, one of ordinary skill in the art will recognize that these processing steps will be executed by a processor. Exh. 1 ¶ 42.

Huawei's proposal completely ignores these processing steps provided in the '292 Patent for performing the recited function and instead just points to block 204 in Fig. 1.

Thus, Maxell's proposed construction accounts for all of the disclosures in the '292 Patent. Therefore, sufficient structure is disclosed in the specification for this claim term. Huawei's proposal would unduly limit the scope of the claims to just a single block shown in the drawings and does not account for the structure that will be required to carry out the disclosed operations that are performed to calculate reliability.

Accordingly, the Court should adopt Maxell's proposed construction and find that the disclosed structure is sufficient.

- d) "cellular receiver means for receiving cellular-oriented signals and generating received cellular signals"

Maxell's Proposed Construction	Huawei's Proposed Construction
<p><b>Function:</b> receiving cellular-oriented signals and generating received cellular signals</p> <p><b>Structure:</b> A cellular receiver 300 and/or components within a mobile handset that receive and generate cellular signals, such as, an antenna, a transceiver, a processor that performs cellular receiving processes as described in Fig. 2 (block 603) and</p>	<p><b>Function:</b> (1) receiving cellular-oriented signals and (2) generating received cellular signals</p> <p><b>Structure:</b> cellular receiver 300, Block 603 in Fig. 2</p>

corresponding recitations in the specification provided herein, or equivalents thereof. <i>See e.g.</i> , (2:66-3:4), (3:10-11; see block 603 in Fig. 2), (4:4-9), (2:53-57), (5:3-7).	
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Once again, Huawei ignores the text of the '292 Patent and narrowly defines the structure for the “cellular receiver means” to be limited to block 300 of the drawing. For the same reasons as noted above, this approach is incorrect. *See Playtex Prods.*, 400 F.3d at 909; *see also Acco Brands*, 2003 WL 25782757, at \*4.

With respect to the cellular receiver means, the '292 Patent explains that:

In much the same way [as explained for the GPS functions], a cellular receiver 300 executes the receive operations required for position determination which preferably include: receiving the cellular signals of high/medium frequencies out of the signals **received by the antenna 100; baseband signal modulation; synchronization acquisition; and reception timing calculation**

'292 Patent at 4:4-16 (emphasis added); *see also* '292 Patent at 2:66-3:11.

Thus, for the same reasons as described above with respect to the “GPS receiver means,” Maxell’s proposed construction is proper because it: (1) accounts for the disclosed antenna 100; (2) incorporates the written description of the '292 Patent as opposed to focusing only on a block in a drawing; (3) does not limit the structure to a single embodiment; and (4) accounts for a processor that would be in the disclosed “mobile handset” that will be required to execute the disclosed reception operations including at least baseband signal modulation. Exh. 1 ¶¶ 44-45.

Accordingly, the Court should adopt Maxell’s proposed construction.

- e) “cellular position calculation means for calculating the mobile handset’s position from the received cellular signals and outputting a cellular-based position result”

Maxell’s Proposed Construction	Huawei’s Proposed Construction
<b>Function:</b> calculating the mobile handset’s position from the received cellular signals and outputting a cellular-based position result  <b>Structure:</b> A position calculation unit 301 and/or components within a mobile handset that perform processing functions, such	<b>Function:</b> (1) calculating the mobile handset’s position from the received cellular signals and (2) outputting a cellular based position result.  <b>Structure:</b> position calculation unit for cellular 301, which is insufficient structure because the

as, a CPU programmed to execute processing in accordance with the algorithm set forth in the specification, or a processor that performs cellular position calculation processes as described in Fig. 2 (block 604) and corresponding recitations in the specification as provided herein, or equivalents thereof. <i>See e.g.</i> , (1:23-27), (3:10-11; block 604 in Fig. 2), (4:4-16), (2:66-3:6), (5:3-7).	specification does not disclose the necessary algorithm or flowchart, which renders the term indefinite
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The parties agree that this term is an MPF term and agree on the function corresponding to this term. The parties agree that the position calculation unit for cellular 301 includes part of the structure that corresponds to the cellular position calculation means. But Maxell disagrees that this is the only disclosed structure.

Huawei also is incorrect that the '292 Patent does not provide sufficient structure for this term. Once again, Huawei has failed to read the specification and has focused only on a block from a Figure of the '292 Patent, ignoring the rest of the written description of the '292 Patent. This is legally improper. *See Playtex Prods.*, 400 F.3d at 909; *see also Acco Brands*, 2003 WL 25782757, at \*4; *Vulcan Eng'g*, 278 F.3d at 1376.

The specification of the '292 Patent explicitly provides the following disclosure:

In much the same way [as explained for the GPS functions], a cellular receiver 300 executes the **receive operations required for position determination** which preferably include: receiving the cellular signals of high/medium frequencies out of the signals **received by the antenna 100; baseband signal modulation; synchronization acquisition; and reception timing calculation.**

'292 Patent at 4:4-16 (emphases added); *see also* '292 Patent at 2:66-3:6 (describing receiver operations); '292 Patent at 1:23-23 (disclosing calculating a position using cellular signals based on "propagation delay time of RF carriers.").

As discussed above with respect to the "GPS position calculation mean," the disclosure of the '292 Patent makes clear that the claimed cellular position calculation means makes a "position determination" based on execution of receive operations, such as, "baseband signal

modulation; synchronization acquisition; and reception timing calculation” as part of the reception. *Id.* For example, the patent discloses that “the handset calculates its current location using the propagation delay time of the RF carriers.” *Id.* at 1:26-28. One of ordinary skill in the art would understand that a processor would be a basic component of the disclosed “mobile handset” that will be required to “execute[] the receive operations” of baseband signal modulation, synchronization acquisition, and reception timing calculation and, as disclosed by the ’292 Patent, these operations are “required for position determination.” Exh. 1 ¶¶ 46-48; *see also* ’292 Patent at 3:24-32. The ’292 Patent also makes clear that the disclosed invention can be performed by “a single mobile handset,” which will necessarily include a processor for executing the disclosed operations. ’292 Patent at 5:3-7.

Accordingly, the Court should adopt Maxell’s proposed construction and find that the disclosed structure is sufficient.

- f) “cellular reliability calculation means for calculating cellular positioning reliability based on the cellular-based position result”

Maxell’s Proposed Construction	Huawei’s Proposed Construction
<p><b>Function:</b> calculating cellular positioning reliability based on the cellular-based position result</p> <p><b>Structure:</b> A cellular reliability calculation unit 304 and/or components within a mobile handset that perform processing functions, such as, a CPU programmed to execute processing in accordance with the algorithm set forth in the specification, , a processor that performs cellular reliability calculation processes as described in Fig. 2 (block 605) and corresponding recitations in the specification as provided herein, or equivalents thereof. <i>See e.g.</i>, (3:10-11; block 605 in Fig. 2), (4:15-42), (3:6-11), (5:3-7).</p>	<p><b>Function:</b> calculating cellular positioning reliability based on the cellular-based position result</p> <p><b>Structure:</b> cellular reliability calculation unit 304, which is insufficient structure because the specification does not disclose the necessary algorithm or flowchart, which renders the term indefinite</p>

For the same reasons as discussed above with respect to the “GPS reliability calculation means for calculating GPS positioning reliability based on the GPS-based position result,” the Court should adopt Maxell’s proposed construction and find that the disclosed structure is sufficient. This is at least because the ’292 Patent explains that cellular positioning reliability is

calculated in the same way as cellular positioning reliability, *i.e.*, “using the number of cellular base stations used in calculating  $L_{\text{cell}}$  and the received signal quality for the signals from each cellular base station.” ’292 Patent at 3:6-11; *see also* § IV.C.6, *supra*. Thus, sufficient structure is disclosed in the ’292 Patent and Maxell’s proposed construction identifies this structure while Huawei chooses to simply ignore the written text of the specification and focus on a single block in the drawings. Exh. 1 ¶ 49. Huawei’s argument should be rejected.

- g) “GPS/cellular positioning results combining means for combining the GPS-based position result and the cellular-based position result with the GPS positioning reliability and the cellular positioning reliability”

Maxell’s Proposed Construction	Huawei’s Proposed Construction
<p><b>Function:</b> combining the GPS-based position result and the cellular-based position result with the GPS positioning reliability and the cellular positioning reliability</p> <p><b>Structure:</b> GPS/cellular positioning results combining unit 400 and/or components within a mobile handset that perform processing functions, such as, a CPU programmed to execute processing in accordance with the algorithm set forth in the specification, a processor that combines GPS/cellular position as described in Fig. 2 (block 605) and corresponding recitations in the specification as provided herein, or equivalents thereof. <i>See e.g.</i>, (4:36-56), (Fig. 3 at 400), (3:12-17), (3:64-4:3), (5:3-7).</p>	<p><b>Function:</b> combining the GPS based position result and the cellular-based position result with the GPS positioning reliability and the cellular positioning reliability</p> <p><b>Structure:</b> GPS / Cellular Positioning Results Combining Unit 400 performing the weighted mean disclosed in Figure 3 and at col. 4:49-56, block 606 in Fig. 2</p>

The parties agree that this term is an MPF term and generally agree on the function corresponding to this term. The parties also agree that block 400 in Figure 3 and col. 4:42-56 includes part of the structure that corresponds to the GPS/cellular positioning results combining means. But this is not the only disclosed structure or processing step. The ’292 Patent provides examples of processing steps that are to be performed by the claimed combining means in addition to performing the weighted mean disclosed in Figure 3. Yet Huawei seeks to limit these means to just the weighted mean disclosed in Figure 3. For example, the ’292 Patent discloses:

In some cases, the GPS reliability calculation unit 204 may determine that positioning by GPS is impossible. (For example, if the number of GPS satellites

used is found to be two or less). In that event, the GPS reliability calculation unit 204 preferably outputs **a value of 0 as the reliability 205 so that the GPS-based position calculation result 202 has no effect on further processing.**

'292 Patent at 3:64-4:3 (emphasis added); *see also* '292 Patent at 4:36-42 (explaining that in some cases the cellular reliability output will be 0 so that the position calculation result 302 using the cellular signals has no effect on further processing). In the case where reliability of the cellular or GPS based position is zero, the combining means will not necessarily need to perform a weighted mean because the other non-zero position will be selected. Exh. 1 ¶¶ 50-51.

Claims “are construed in light of the specification, and are not limited to a designated preferred embodiment.” *See Vulcan Eng’g*, 278 F.3d at 1376. Huawei’s proposed construction focuses only on the preferred embodiment disclosed in Figure 3 and does not account for the embodiments where the “GPS/cellular positioning results combining means” will ignore the “GPS-based position calculation result 202” or the cellular based position calculation result 302 because they were unreliable. *See* '292 Patent at 3:64-4:3, 4:36-42. Maxell’s proposed construction accounts for these embodiments and therefore identifies a structure that is capable of performing the disclosed functions. And as explained above, because the '292 Patent can be performed by “a single mobile handset,” a processor that can perform the claimed function is necessarily included. Exh. 1 ¶¶ 50-51. Accordingly, the Court should adopt Maxell’s proposal.

h) “combining” / “combined”

Maxell’s Proposed Construction	Huawei’s Proposed Construction
“a determination based on one or more inputs”	“merging” / “merged”

The parties’ dispute with respect to the claimed term “combining/combined” stems from the same dispute as discussed above with respect to the “GPS/cellular positioning results combining means.” Specifically, Maxell’s proposed construction accounts for the embodiments

where the “GPS-based position calculation result 202” or the cellular based position calculation result 302 will have “no effect on further processing” because they assigned a reliability value of 0. *See* ’292 Patent at 3:64-4:3, 4:36-42; Exh.1 ¶ 51. Thus, Maxell has proposed a construction for combining that is consistent with the embodiments disclosed in the specification—*i.e.*, “a determination based on one or more inputs” because in the scenario where the reliability value of one of the positions is 0, the combining means will make a determination based on one input.

Huawei’s proposed construction excludes this disclosed embodiment. In addition, it is not clear what Huawei intends “merging” or “merged” to mean and how it is different from the plain language of the claim, *i.e.*, “combining” or “combined.” Indeed, “[a] claim construction that excludes a preferred embodiment . . . is ‘rarely, if ever, correct.’” *Sandisk Corp. v. Memorex Prods., Inc.*, 415 F.3d 1278, 1285 (Fed. Cir. 2005) (*quoting Vitronics*, 90 F.3d at 1583).

Accordingly, the Court should adopt Maxell’s proposed construction because it does not exclude the disclosed embodiments, as Huawei’s does.

#### **D. The ’517 Patent**

##### **1. Background of the ’517 Patent**

At the time of the ’517 Patent, which has a priority date of August 1, 2002, communication using a mobile device could be less reliable when the device was traveling at a high rate of speed. At the time, conventional methods for switching among physical interfaces for a communication (*e.g.*, cellular and Wi-Fi) were based on availability and favorability of a particular physical interface. *See* ’517 Patent at 1:22-33. Because these factors change during movement of the mobile device, the conventional methods caused communication instability particularly when the device was moving. *See id.* at 1:33-50.

The ’517 Patent solved this problem by selecting a suitable physical interface based on three factors: (1) physical interface availability; (2) device movement speed; and (3) position of

the device. *Id.* at 5:30-6:61. The combination of these three factors ensures that connections remain stable by delaying the switching of physical interfaces when the device is moving at a high speed, while switching more quickly when a device is stationary or moving at a slow rate of speed. *Id.* at 4:41-50, 5:3-14.

## 2. Level of Ordinary Skill in the Art for the '517 Patent

For the '517 Patent, a person of ordinary skill in the art would be someone with a working knowledge of wireless communications. The person would have gained this knowledge through an undergraduate Bachelor of Science degree in Electrical Engineering or an equivalent degree, and at least two years of experience working in the field of wireless communications.

## 3. Disputed Term in the '517 Patent

“waits a longer time until switching”

Maxell's Proposed Construction	Huawei's Proposed Construction
Plain and ordinary meaning	sets a longer period of time to wait before determining whether to switch

This is yet another situation where the ordinary meaning of claim language is readily understood by one of ordinary skill in the art, claim construction “involves little more than the application of the widely accepted meaning of commonly understood words.” *See Phillips*, 415 F.3d at 1314. Here, the plain language of the term—“waits a longer time until switching”—is understandable and does not require construction. Huawei's proposed construction, however, imports limitations into the claim from the specification by attempting to limit the claim to the scenario where the period of time is “set.” For example the '517 Patent discloses that, when device 100 remains at rest, the switching wait time “may be set to short” and that when device 100 is moving, the switching wait time “may be set to be long.” '517 Patent at 6:66-7:8 (emphasis added).



Huawei is importing the “set” language from this passage of the ’517 Patent to unnecessarily limit the claim. This, however, is nonsensical because even this passage of the ’517 Patent makes clear that a wait time “may be set,” meaning that a time period is not necessarily always set. *See id.* Thus, Huawei’s interpretation is improper. *See JVW Enters., Inc. v. Interact Accessories, Inc.*, 424 F.3d 1324, 1335 (Fed. Cir. 2005) (“We do not import limitations into claims ..., even when a specification describes very specific embodiments of the invention or even describes only a single embodiment.”).

There is simply no need to provide a construction for this claim as the plain language of the claim can be readily understood by a juror. Thus, the Court should adopt Maxell’s proposal.

#### **E. The ’901 Patent**

##### **1. Background of the ’901 Patent**

Conventional methods for correcting the color characteristics and exposure of a video signal at the time of the ’901 Patent (priority date of March 22, 2005) required analyzing the signal on a frame-by-frame basis, which expended unnecessary processing resources and drained the battery. *See* ’901 Patent at 1:20-98. The ’901 Patent solved this problem by providing a method wherein the color characteristics and exposure of a video signal could be corrected based on lighting conditions that are detected by an illumination sensor. *See id.* at 1:45-56. Specifically, luminance, hue, and saturation values are corrected in accordance with the illumination detected by the illumination sensor when the input video signal changes, but only luminance is corrected where the input video signal does not change and the illumination detected by the illumination sensor is above a predetermined value. *See, e.g., id.* at 8:66-9:15, 10:37-11:9.

##### **2. Level of Ordinary Skill in the Art for the ’901 Patent**

For the ’901 Patent, a person of ordinary skill in the art would be someone with a working knowledge of image processing systems. The person would have gained this knowledge

through an undergraduate Bachelor of Science degree in Electrical/Computer Engineering, Computer Science, or an equivalent degree, and at least two years of experience working in the field of image processing.

### 3. Disputed Terms in the '901 Patent

“when any change occurs in the video signal inputted to the input portion” /  
 “when the change of the video signal does not occur and when the illumination detected by the illumination sensor is above a predetermined value”

Maxell's Proposed Construction	Huawei's Proposed Construction
Plain and ordinary meaning	<p>“in response to any change occurring in the video signal inputted to the input portion”</p> <p>“in response to the change of the video signal not occurring and the illumination detected by the illumination sensor being above a predetermined value”</p>

For both of these terms, Maxell contends that the plain and ordinary meaning is sufficient and that no construction is necessary. Huawei seemingly agrees, as its proposal does not actually define the claim terms but simply parrots the remaining claim language and unnecessarily substitutes “when” with “in response to.” The claims and the specification of the '901 Patent do not recite the term “response” let alone the phrase “in response to.” This fact stands in stark contrast with the recitation of “when” over a hundred times in the patent’s claims and specification. Huawei is essentially asking this Court to amend the claim terms as follows:

- “~~when~~ in response to any change occurs in the video signal inputted to the input portion”
- “~~when~~ in response to the change of the video signal does not occur and when the illumination detected by the illumination sensor is above a predetermined value”

However, there is no support in the intrinsic record for such an amendment. If the patentee intended for the claim term to recite “in response to,” the patentee would have done so. Instead, the patentee chose the readily understood term *when*. There is no reason to change that.

Thus, the Court should reject Huawei’s proposed construction and adopt Maxell’s.

## **F. The '139 Patent**

### **1. Background of the '139 Patent**

The '139 Patent provides a novel method for selecting the best base station among multiple base stations to use in a wireless communication network. Prior to the '139 Patent (priority date of April 13, 2005), a wireless terminal would connect to the base station from which it received a signal with the most power. '139 Patent at 2:8-22. However, using this method can provide a suboptimal result if the selected base station's strength varies widely over a short distance. For example, if a wireless terminal connects to a base station with a strong signal while on one floor of a building, but subsequently moves to another floor of the building where the signal is obfuscated, the quality of communication with that base station may deteriorate greatly and communication with the base station may be broken. *See id.* at 8:22-33.

The solution provided by the '139 Patent includes three steps. First, the wireless terminal receives transmissions from each base station that is classified in a group in order to obtain an index of communication qualities between the wireless terminal and each base station. *See id.* at 4:25-57. Next, the wireless terminal determines characterizing quantities of the communication quality for each of the groups G1, G2, and G3 based on one or more of received power, signal-to-noise ratio, and/or communication bit rate. *See, e.g., id.* at 4:58-5:12. Finally, the wireless terminal identifies the most suitable group and establishes a connection with a base station within the selected group. *See id.* at 5:13-59. Selection of a base station using the method of the '139 Patent reduces the number of times the base station will need to be switched, thus improving the quality of the wireless communications. *See id.* at 3:6-21.

### **2. Level of Ordinary Skill in the Art for the '139 Patent**

The same as defined above for the '292 Patent. *See* § IV.C.2, *supra*.

### 3. Disputed Term in the '139 Patent

“characterizing quantities of the communication quality for each of the groups”

Maxell's Proposed Construction	Huawei's Proposed Construction
“characteristics of the communication quality for each of the groups”	“group scores derived from the indication of communication quality for each base station in a group”

Maxell's proposal for this term simply defines the term “characterizing quantities” because this phrase would not be readily understood and because a construction would be useful for a juror to understand the meaning of this term. Maxell's proposed construction is consistent with the intrinsic evidence because the specification provides the following examples:

- “A characterizing quantity may also be **an average** that is obtained by dividing the total power of each group by the number of base stations in the group” ('139 Patent at 2:60-62) (emphasis added);
- “Upon receiving the wireless signals 211-216, the terminal obtains the charactering quantities, for example, **received powers**” (*id.* at 4:58-60) (emphasis added); and
- “When the **SNR** (Signal-to-Noise Ratio) or the **communication bit rate** is used as the charactering quantities, the wireless communication module 504 also calculates the charactering quantities and the software calculates the group score” (*id.* at 6:6-10) (emphasis added).

These disclosures of the '139 Patent explain that the characterizing quantities can be one or more of an average, received powers, signal-to-noise ratios, and/or communication bit rates. In view of these examples, Maxell's proposed construction describes the term “characterizing quantities” in meaningful terms while also accounting for all of the disclosed examples. All of these examples are disclosed as characteristics of communication quality, and therefore Maxell used the term “characteristics” in its proposed construction.

Huawei's proposed construction, however, unnecessarily limits the claim in multiple ways. First, it requires that group scores be “derived from” the indication of communication

quality. Second, it requires that the group scores be derived from “the indication” of communication quality. Third, it requires that these group scores be based on “each base station in a group.” It is not clear what Huawei means by the group scores being derived from the indication of communication quality. The claim limitation explicitly states “a second step of calculating characterizing quantities of the communication quality for each of the groups.” ’139 Patent at 9:58-59. There is no language in the claim requiring group scores being “derived from” something else. All the claim requires is the calculation of characterizing quantities, not that these characterizing quantities be derived from some indication.

Further, it is not clear what Huawei means by “indication” when the ’139 Patent does not use this term. There are no guidelines on what the claim will mean if it had the term “indication” in it. There is no antecedent basis for the phrase “the indication” in the claim, so Huawei’s proposal will render the term indefinite. Also, the claim language is clear that the characterizing quantities are calculated “for each of the groups,” but Huawei attempts to narrow it further by requiring the characterizing quantities to be something that is derived from “each base station” in a group. This is unnecessarily narrowing and not what was intended by the inventors.

Thus, the Court should reject Huawei’s proposed construction and adopt Maxell’s.

## **G. The ’760 Patent**

### **1. Background of the ’760 Patent**

The ’760 Patent is a continuation patent and claims priority from the same Japanese Patent Application to which the ’440 Patent claims priority (July 5, 1999). The claims of the ’760 Patent are directed to solving the problem of facilitating recording and reproduction of still pictures including “fine” still pictures, *i.e.*, high resolution still pictures. Specifically, the ’760 Patent explains that conventional techniques at the time did not provide a capability for a recordable video player to record and playback high resolution still images (*e.g.*, fine still

pictures with a large number of pixels per frame) using multiple formats and also record and playback moving pictures having a smaller number of pixels per frame. *See id.* at 3:25-31. The '760 Patent provides a method in which the still pictures are encoded in multiple formats including being encoded by a second encoding method, for example using the same encoding method used for moving pictures. *See id.* at 3:25-31. Encoding a still image with multiple encoding formats enables reproduction by various reproducing devices.

## 2. Level of Ordinary Skill in the Art for the '760 Patent

The same as defined above for the '440 Patent. *See* § IV.B.2, *supra*.

## 3. Disputed Term in the '760 Patent

“first encoding method”

Maxell's Proposed Construction	Huawei's Proposed Construction
Plain and ordinary meaning	“moving picture encoding method”

Maxell contends that the term “first encoding method” would be readily understood by one of ordinary skill in the art and requires no construction. There simply is no reason to construe this term. For example, claim 1 of the '760 Patent recites “a first **still picture** recorded thereon **encoded by a first encoding** method.” '760 Patent at 14:44-45 (emphasis added). The language is clear. The first encoding method is one of potentially several encoding methods that may be used for encoding still pictures, for example JPEG, MPEG, or others, without any preferential order. *See* '760 Patent at 8:5-7, 8:9-11. The patent discloses that still pictures “may be recorded in any file format and in any different file formats.” *Id.* at 11:14-15. There is no ambiguity in the claim that would limit the first encoding method to be a moving picture encoding method.

Further, Huawei contradicts its own proposed construction for the term “still pictures encoded by a second encoding method, and second pictures corresponding to the still pictures and having a smaller number of pixels than the still pictures are recorded,” in the ’440 Patent, despite both patents sharing the same specification. There, Huawei proposed that “still pictures [are] encoded by the first encoding method and by a second encoding method, and second pictures corresponding to the still pictures and having a smaller number of pixels than the still pictures are recorded.” *See* Joint Claim Construction and Prehearing Statement at 15-16 (emphasis added). Here, however, Huawei is proposing that the first encoding method be limited to a moving picture encoding method. Such an approach must be rejected.

Thus, this Court should reject Huawei’s proposed construction and adopt Maxell’s.

## **H. The ’438 Patent**

### **1. Background of the ’438 Patent**

At the time of the ’438 Patent (priority date of May 22, 2003), conventional systems with display devices did not have any requirement that only a device that is in a physical location near the display device can change the content that is displayed on the display device. *See* ’438 Patent at 1:24-41. For example, someone with an Internet connection could access a display device on an unsecure network and remotely change the content that is displayed on the display device (*e.g.*, arrival time of flights or trains in an airport or train station). *Id.* The display device did not have capability to detect whether the user was authenticated and was located close to it during the authentication process ensuring that the content being changed was accurate.

The ’438 Patent solves this problem by ensuring that the remote device is in close proximity to the display device by requiring authentication using short-distance communication prior to allowing content to be transmitted for display. *See id.* at 9:65-10:8. For example, if the remote device is within range and is properly authenticated using the short-distance

communication unit, it will be permitted to exchange data with the display device using an additional communication component. *See id.* at 6:51-7:46.

## 2. Level of Ordinary Skill in the Art for the '438 Patent

For the '438 Patent, a person of ordinary skill in the art would be someone with a working knowledge of wireless communications. The person would have gained this knowledge through an undergraduate Bachelor of Science degree in Electrical Engineering or an equivalent degree, and at least one year of experience working in the field of wireless communications.

## 3. Disputed Term in the '438 Patent

“an input entered by a user”

Maxell's Proposed Construction	Huawei's Proposed Construction
Plain and ordinary meaning	“data entered by a user, such as a user ID and password, that validates the user”

“An input entered by a user” would be readily understood and requires no construction. Further, there is support in the intrinsic record to not limit this “input” to data “that validates the user” as required by Huawei’s proposed construction. For example, the '438 Patent explains that “the user of the mobile terminal 1 selects an operation to **contribute a content to a notice board by operating the input/output unit 103** to select the display area 1101 appearing on the top screen displayed at the step S722 as described above.” '438 Patent at 7:52-56. Further, the '438 Patent explains that the user may input a “picture” or a “message in message field 1202” to contribute to the message board. *Id.* at 7:58-65; *see also id.* at Figs. 10, 12, and 13 (showing different messages inputted by a user). Thus, while the '438 Patent provides example of data being used for an authentication process, the '438 Patent also provides additional examples, and there is no support in the intrinsic record to exclude the embodiments disclosed in the specification. Huawei’s proposed construction, however, does just that.



Thus, the Court should reject Huawei's proposed construction and adopt Maxell's.

## **I. The '491 Patent**

### **1. Background of the '491 Patent**

In order to play audio and voice signals in multiple formats, decoders in conventional devices at the time of the '491 Patent (which claims priority to November 4, 1998) had to have built-in memory space to store code for decompressing signals in each of those multiple formats. '491 Patent at 1:32-55. This need for substantial built-in memory caused conventional audio decoders to consume considerable space, making them difficult to integrate into existing products. *Id.* at 1:65-2:6. In addition, conventional decoders were inflexible: they could not easily be updated to include new or revised decoding instructions. *Id.* at 2:6-10.

The '491 Patent solved this problem by designing a decoder that could pull the necessary code and other information for decompressing and decoding signals of different formats from outside of the built-in memory. *Id.* at 2:11-45. A controller detects a change in the format or type of compression and encoding and transfers the necessary code for decompressing and decoding audio signals according to the new format to the audio decoder's memory. *Id.* at 7:5-12, 7:55-67. For example, the new code may come from an external source, such as the Internet (*id.* at 8:6-15, 10:48-53) or from another memory location (*id.* at 8:6-15, 9:54-63).

Thus, when a decoder that practices one of the inventions disclosed in this patent does not have the appropriate program code for the particular method of encoding in its memory, it can obtain the appropriate code from another memory, or it can download the new code from an external source, like the Internet. *See id.* at 8:6-15, 9:54-63. This allows a decoder in accordance with the '491 Patent to have the flexibility to process audio signals of numerous formats, without requiring large circuitry to store each type of program code.

## 2. Level of Ordinary Skill in the Art for the '491 Patent

For the '491 Patent, a person of ordinary skill in the art would be someone with a working knowledge of audio signal processing. The person would have gained this knowledge through an undergraduate Bachelor of Science Degree in Electrical/Computer Engineering or Computer Science or an equivalent degree, and at least two years of experience working in the field of audio signal processing.

## 3. Disputed Terms in the '491 Patent

- a) “controller means for detecting change in said method of compression and encoding, and for transferring the decoding program code corresponding to the method of the compression and encoding after being changed, from said read-only memory to said first memory”

Maxell's Proposed Construction	ZTE's Proposed Construction
<p><b>Function:</b> detecting change in said method of compression and encoding, and for transferring the decoding program code corresponding to the method of the compression and encoding after being changed, from said read-only memory to said first memory</p> <p><b>Structure:</b> At least one processor – such as a CPU –programmed to execute processing in accordance with the algorithm set forth in flowcharts of Fig. 4 (including steps S3, S5-S9), Fig. 9 (including steps S3-S14) and corresponding citations in the specification at 5:60-64, 6:30-7:54, 9:13-18, 9:28-44, and FIGS. 1, 4-6, and 9, as well as equivalents thereof</p>	<p><u>Function:</u> Claim 1: “for detecting change in said method of compression and encoding, and for transferring the decoding program code corresponding to the method of the compression and encoding after being changed, from said read-only memory to said first memory”</p> <p>Claim 2: “for transferring said plural decoding program codes from said read only memory to said second memory in advance, as well as for detecting change in said method of compression and encoding, and for transferring the decoding program code corresponding to the method of the compression and encoding after being changed, from said read only memory to said first memory”</p> <p><u>Structure:</u> Claims 1 &amp;2 : an external CPU (FIG 1) connected via a bus between a read only memory and the first memory, running the algorithm of Figs. 4 and 5. (6:30–7:54)</p>

The parties agree that “controller means” is an MPF term that has a CPU as a corresponding structure, but the parties disagree on whether this CPU is “external” and “connected via a bus between a read only memory and the first memory.” Maxell’s proposed structure captures the exemplary structures described in the '794 Patent’s specification, while ZTE’s proposal seeks to unduly limit the scope of this term.

Maxell's proposal captures the structures described in the specification for performing the stated function of detecting a change in the method of compression and for transferring decoding program code corresponding to the method of the compression.

On the other hand, ZTE's proposal would unduly limit the scope of the claims in several ways. For example, ZTE would inject the limitation of an "external" CPU into the claims without pointing to a clear intention by the inventors to narrow the claims in this way. And by limiting the claim to an external CPU, ZTE is unnecessarily forcing the structure to be something that is "connected via a bus between a read only memory and the first memory." Here again, ZTE is simply seeking to limit the scope of the claims to a preferred embodiment. Such narrowing of claim scope is unreasonable.

Moreover, ZTE's construction sits in uneasy tension with the natural language of the claim itself. The claims are directed to a "multiplexed audio data decoder apparatus" that "comprises" (in other words, includes) the "controller means." Yet ZTE would twist this plain language to require that the "controller means," which the claim language mandates to be included in the multiplexed audio data decoder apparatus, be a CPU that is external to the multiplexed audio data decoder apparatus. This nonsensical result defies the claim language itself and therefore cannot be correct.

The external CPU disclosed in the specification is used in an embodiment in which an exemplary multiplexed audio data decoder apparatus incorporates a DSP that is placed inside a audio decoder 20 that constitutes a self-contained unit which is integrated into the multiplexed audio data decoder. *See, e.g.*, '491 Patent at 2:4-6 ("integrate the audio decoder including the DSP"); *id.* at 2:11-13 ("a multiplexed audio data decoder apparatus and a receiver apparatus, in which integration of the audio decoder is easy"). Accordingly, the term *external* merely

describes a location of the CPU (*e.g.*, CPU 50) with respect to such integrated audio decoder.

However, the claimed “multiplexed audio data decoder apparatus” does not recite such an audio decoder and does not require the CPU to be external to any specific structure. Moreover, the specification of the ’491 Patent does not associate the location (external or otherwise) of the CPU 50 with the performance of the recited function. Thus, there is no basis to limit the claimed structure to an external CPU that is connected via a bus.

- b) “a demultiplexer for inputting one audio data sequence which is compressed and encoded, being selected from a plurality of audio data sequences which are multiplexed”

Maxell’s Proposed Construction	ZTE’s Proposed Construction
Not a means-plus-function term; plain and ordinary meaning	Indefinite  Alternative if not indefinite:  a demultiplexer that outputs one data sequence, which is compressed and encoded, to the input of a frame sync. The demultiplexer itself does this inputting and also extracts the method of compression and encoding.

ZTE contends that the term “demultiplexer” is indefinite and has also proposed an alternative construction for the term. Because this term would be readily understood by those of ordinary skill in the art, it is not indefinite and needs no construction. ZTE has already conceded as much by agreeing to the plain and ordinary meaning of the term “a demultiplexer for extracting the one audio data sequence . . . ,” as recited by claims 1, 2, and 9 of the ’491 Patent. *See Joint Claim Construction and Prehearing Statement at 8.* ZTE’s agreement that the same term in the same patent has its plain and ordinary meaning undermines ZTE’s indefiniteness theory and highlights the inconsistencies in its claim construction positions.

A “demultiplexer” is a well-known term to those of skill in the art. As Dr. Maher explains, a multiplexer is a component that combines multiple independent signals (multiplexed) for concurrent transport over a common signal path, whereby the independent signals can later

be separated (demultiplexed) again for subsequent independent processing. Maher Decl. (“Exh. 2”) ¶ 25. A person of skill in the art would also recognize that a demultiplexer refers to a particular component that has a sufficiently definite structure. *Id.* at ¶¶ 33-34. Accordingly, a person of ordinary skill in the art would understand the “demultiplexer” of claims 7 and 8 of the ’491 Patent with reasonable certainty. *Id.*

To the extent ZTE contends that this term is an MPF term to support their indefiniteness theory,<sup>8</sup> that contention should be rejected. For example, as Dr. Maher explained, a “demultiplexer” connotes sufficiently definite structure to a person of ordinary skill in the art. Exh. 2 ¶ 34. Other courts have agreed that “demultiplexer” is not an MPF term. *Koninklijke Philips N.V. v. AsusTek Computer Inc.*, 2017 WL 2957927, at \*5 n.2 (D. Del. July 11, 2017) (finding that “demultiplexer” “was a well-known element in the electronic arts as of the filing date of the [asserted patent] and refers to a particular structure” and refusing to construe “demultiplexing means” as an MPF limitation).

ZTE’s alternative proposal is also unsupported. For example, ZTE’s Rule 4-3 disclosures fail to point to any intrinsic evidence that supports this narrow proposal. Specifically, ZTE has not pointed to anything in the ’491 Patent’s specification or prosecution history that supports an interpretation of “demultiplexer” whereby the “demultiplexer itself ... extracts the method of compression and encoding.” ZTE’s alternative proposal should be rejected.

The “demultiplexer” term is not indefinite and should not be treated as an MPF term. Because this term would be readily understood by a person of ordinary skill in the art, it should be given its plain and ordinary meaning.

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<sup>8</sup> Defendants have not yet provided insight into their indefiniteness theory for this term. Accordingly, Maxell reserves the right to respond to Defendants’ arguments more fully.

## **J. The '317 Patent**

### **1. Background of the '317 Patent**

The '317 Patent, which claims priority to July 12, 1999, solves a problem that existed in conventional navigation systems at the time. Prior to the '317 Patent, conventional navigation systems were unsuitable for walking navigation. '317 Patent at 1:31-43. Conventional systems were too large to be carried by a walking user, would not provide information about the direction and orientation of a user, and were unsuitable for display on the smaller screens of portable devices, among other problems. *Id.* at 1:31-52.

Recognizing these shortcomings with conventional systems, the inventors of the '317 Patent conceived a portable terminal that would aid users who wished to have real-time directions while walking. *Id.* at 2:51-61. These inventors implemented a portable terminal that displays information about the direction a user is facing and displays navigation information that can be displayed on screens of different sizes including, for example, a narrow screen of a portable terminal. *Id.* at 3:5-42.

### **2. Level of Ordinary Skill in the Art for the '317 Patent**

For the '317 Patent, a person of ordinary skill in the art would be someone with a working knowledge of GPS systems. The person would have gained this knowledge through an undergraduate Bachelor of Science Degree in Electrical/Computer Engineering or Computer Science or an equivalent degree, and at least one year of experience working in the field of GPS systems.

### **3. Disputed Terms in the '317 Patent**

“walking navigation”

<b>Maxell's Proposed Construction</b>	<b>ZTE's Proposed Construction</b>
“information to navigate a user who is walking”	“display of information to assist a user in walking, not driving,

	in a system that is not usable in an object car that is running on a road”
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ZTE’s proposed construction for “walking navigation” seeks to wedge an unjustifiable negative limitation into the claim language, and it should therefore be rejected. *See Microlinc, LLC v. Intel Corp.*, 2013 WL 2471551, at \*18-19 (E.D. Tex. June 7, 2013) (citing *Omega Eng’g, Inc. v. Raytek Corp.*, 334 F.3d 1314, 1332-33 (Fed. Cir. 2003) (observing that, absent an explicit disavowal, negative limitations are generally disfavored)).

There is no support for ZTE’s attempt to morph the claim into “a system that is not usable in an object car that is running on a road” in either the prosecution history or the ’317 Patent’s specification. Indeed, ZTE’s only intrinsic evidence is a single passage in the background section of the patent that discusses that some prior art car navigation system “cannot be used as a walker’s navigation system as is” because it “is too large for a walker to carry” and “because the navigation system premises that the system is used while the object car is running on a road.” *See* ’317 Patent at 1:34-37 (emphasis added). However, the same passage explains that the bulkiness issue can be resolved by using “a PDA with GPS and a handy GPS” as a location information system for walkers. *Id.* at 1:37-39. Nowhere in this passage from the background section, nor in the described embodiments, does the patent exclude using a portable location information system such as “a PDA with GPS and a handy GPS” in a car, as ZTE proposes.

This passing mention of the inapplicability of bulky driving navigation systems to a walking situation does not justify the addition of a negative limitation in the claimed invention. *See Brookhill-Wilk 1, LLC v. Intuitive Surgical, Inc.*, 326 F.3d 1215, 1222-23 (Fed. Cir. 2003) (declining to limit interpretation of claim based upon statements in “objects of the invention” and “background” sections of the asserted patent).

The term “walking navigation” is readily understood, and thus its construction should “involve[] little more than the application of the widely accepted meaning of commonly understood words.” *See Phillips*, 415 F.3d at 1314.

Maxell’s proposal (“information to navigate a user who is walking”) embraces the term’s plain meaning and, in contrast to ZTE’s overly complex and unduly narrow definition, aligns with how the specification uses this term. For example, the ’317 Patent describes several specific examples of “walking navigation,” and each example entails providing information that navigates a user that is walking. *See, e.g.*, ’317 Patent at 7:43-8:9 (describing “the function of walking navigation” in the context of a “Neighborhood Guidance Service” example), 8:10-57 (describing “the function of walking navigation” in the context of a “Meeting by Appointment Guidance Service” example), 8:58-9:39 (describing “the function of walking navigation” in the context of a “Present Place Guidance Service” example).

The patent’s figures also make it plain that “walking navigation” means information that navigates a user that is walking. For example, Figure 3 depicts information (in the form of directional arrows in this embodiment) that aids a user in navigating to a particular location.

Accordingly, Maxell’s proposal should be adopted.

## **K. The ’493<sup>9</sup> and ’729 Patents**

### **1. Background of the ’493 and ’729 Patents**

Electric (or, digital) cameras operate using image sensing devices sometimes called “image sensors.” ’729 Patent at 1:20-31. An exemplary image sensor disclosed in the ’493 and ’729 Patents contains an array of picture elements (or, pixels) arranged in a two-dimensional grid. *Id.* at 4:40-43. Each pixel in the image sensor array will generate a digital signal in response

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<sup>9</sup> There are no disputed terms from the ’493 Patent, but both the ’493 and ’729 Patents share a specification and are directed to the same subject matter.



to light incident on a photodiode within the pixel. *Id.* at 4:40-65. These signals are collected by specialized circuitry and output as a digital image. *Id.*

Prior to the inventions disclosed in the '493 and '729 Patents (which both claim priority to January 11, 2000), conventional electric cameras could not effectively capture both still and moving images. For example, when taking still pictures with a camera designed for taking moving images, the number of pixels was insufficient for a high-quality still image. *Id.* at 2:64-66. Conversely, when taking moving images with a camera designed for taking still images, the dynamic image quality of the moving image would deteriorate, and the required circuitry would increase. *Id.* at 2:67-3:2.

The inventors of the '493 and '729 Patents solved these problems. For example, one problem affecting the quality of moving images is the amount of image instability due to vertical and horizontal movement of the electric camera. The '729 Patent solves this problem by changing an effective set of pixels based on a detected amount of image instability. This allows electric cameras that practice this patent to focus the effective set of pixels on where it is needed most, as opposed to conventional cameras that utilized a static effective pixel area. In this way, an electric camera that practices the '729 Patent can achieve higher-resolution images and better dynamic image quality with a smaller number of pixels in the image sensor array.

## **2. Level of Ordinary Skill in the Art for the '493 and '729 Patents**

The same as defined above for the '901 Patent. *See* § IV.E.2, *supra*.

## **3. Disputed Terms in the '729 Patent**

The disputes concerning the '729 Patent relate to image sensing, image processing, and image instability detection. While Maxell's proposed constructions embrace the customary, well-known meanings these terms have to those of skill in the art, ZTE's proposals overcomplicate these easily-understandable words.

- a) “an image sensing device having an array of pixels arranged vertically and horizontally in a grid pattern”

Maxell's Proposed Construction	ZTE's Proposed Construction
Plain and ordinary meaning	<p>This is a means-plus-function element to be construed in accordance with 35 U.S.C. § 112, ¶ 6.</p> <p><b>Function:</b> “for image sensing”</p> <p><b>Structure:</b> a solid state image sensing device with a light receiving sensor having an array of pixels arranged vertically and horizontally in a grid pattern and having an equal number of color sensitive filter elements arranged such that each color forms a vertical line.</p> <p><i>See</i> “a solid-state image sensing device with a light receiving sensor having an array of pixels arranged vertically and horizontally in a grid pattern, in an N number of vertically arranged pixel lines” (2:59)</p> <p><i>See also</i> FIGs 10, 13A, and 13B; [6:17-22]; [15:23-35]</p>

The parties disagree about whether “an image sensing device having an array of pixels arranged vertically and horizontally in a grid pattern” should be subject to § 112, ¶ 6. For at least three reasons, this term should be given its plain and ordinary meaning and should not be subject to § 112, ¶ 6.

First, the term “image sensing device” alone denotes a definite structure or class of structures, namely, image sensors. Indeed, a person of ordinary skill in the art would understand, both from the claim language itself and from the descriptions of an “image sensing device” in the specification,<sup>10</sup> that this term refers to a definite class of structures that convert incident light into an electric signal. ’729 Patent at 4:36-39; Madisetti Decl. (“Exh. 4”) ¶¶ 35-37. In other words, the claim itself also describes the structure for the “image sensing device”: it has “an array of pixels arranged vertically and horizontally in a grid pattern”—thus further showing that this term has sufficiently definite structure. *See Free Stream Media Corp. v. Alphonso Inc.*, 2017 WL 1165578, at \*25 (E.D. Tex. Mar. 29, 2017) (declining to construe “client device” as an MPF term

<sup>10</sup> For example, the ’729 Patent teaches that “the image sensing device may have any desired structure as long as it can realize the mixing or culling of pixels that meets the above conditions.” ’729 Patent at 10:14-18.

because “the claims themselves connote sufficiently definite structure by describing how the ‘client device’ operates within the claimed invention to achieve its objectives”).

Second, the ’729 Patent’s specification describes in detail exemplary structures for the “image sensing device.” For example, Figure 2 shows an example image sensing device with pixels 30 “each formed of a photodiode,” transfer gates 31, and transfer units 32 and 33. *See* ’729 Patent at 4:36-65, FIG. 2. While the specification of the ’729 Patent discloses arranging color filters on the pixels of the image sensing device, the specification does not associate “color filter” with the image sensing capability of the image sensor. Indeed, even ZTE’s primary support from the specification does not include any reference to “color sensitive filter elements arranged such that each color forms a vertical line.”

Third, the fallacy in ZTE’s proposal is evident from its corresponding structure: “a solid state image sensing device ....” ZTE seeks to define this term using the very same language found in the claim, along with additional, unjustifiably narrow constraints, such as limiting the image sensing device to the “solid state” embodiment and as having “an equal number of color sensitive filter elements arranged such that each color forms a vertical line.” ZTE’s attempt to construe “an image sensing device” as a “solid state image sensing device” should be rejected as unhelpful to the jury.

Accordingly, the term “image sensing device” is not an MPF term. And because this term would be readily understood by a person of ordinary skill in the art, no construction is needed, and the term should simply be given its plain and ordinary meaning.

b) “an image instability detector”

Maxell’s Proposed Construction	ZTE’s Proposed Construction
“a device, such as a gyroscopic sensor or the like, capable of detecting an image	Indefinite This is a means-plus-function element to be construed in accordance

instability of the electric camera”	with 35 U.S.C. § 112, ¶ 6. <b>Function:</b> “detecting an image-instability of the electric camera” <b>Structure:</b> insufficient corresponding structure disclosed
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“Image instability detector” should not be interpreted as an MPF term for at least three reasons. First, the claim itself does not invoke § 112, ¶ 6. The term does not appear in “traditional” MPF format: it lacks a “for” clause and a stated function. Moreover, the claim language itself denotes sufficient structure by describing how the sensor operates (“detect[ing] an amount of image-instability of the camera”). *See Free Stream Media*, 2017 WL 1165578 \*25 (declining to construe “client device” as an MPF term because “the claims themselves connote sufficiently definite structure by describing how the ‘client device’ operates”).

Second, the Federal Circuit has held that “‘detector’ is a sufficiently definite structural term to preclude the application of § 112, P 6.” *Personalized Media v. Int’l Trade Comm’n*, 161 F.3d 696, 705 (Fed. Cir. 1998). Numerous post-*Williamson* courts, including this Court, have cited to *Personalized Media* approvingly. *See, e.g., Raytheon Co. v. Cray, Inc.*, 2017 U.S. Dist. LEXIS 89342, at \*69-70 (E.D. Tex. June 9, 2017); *see also NetFuel, Inc. v. F5 Networks, Inc.*, 2017 WL 2834538, at \*19 (N.D. Ill. June 29, 2017) (concluding that “detector” is “more definite than ‘means’ or ‘mechanism’”).

Third, the specification expressly describes “gyro sensors 16a, 16b, that detect vertical and horizontal image-unstabilities [sic].” ’729 Patent at 7:12-14. “Gyro sensors” are exemplary specific, definite, and sufficient structures for detecting image instabilities. ZTE’s indefiniteness allegation ignores the disclosed structures for the instability detector and thus should be rejected.

For these reasons, the term “image instability detector” should not be interpreted as an MPF term and thus is not indefinite. Instead, this term should be construed in line with the description of the image instability detection devices in the specification, and should include “a

device, such as a gyroscopic sensor or the like, capable of detecting image instability of the electric camera.”

c) “an amount of image-instability of the camera”

Maxell’s Proposed Construction	ZTE’s Proposed Construction
“an amount of instability caused by vertical and/or horizontal movement of the electric camera”	Indefinite

ZTE contends that “an amount of image instability of the camera” is indefinite, but this term would be readily understood by a person of ordinary skill in the art. Indeed, upon reading the specification of the ’729 Patent, a person of ordinary skill in the art would recognize that “an amount of image instability of the camera” refers to the amount of vertical or horizontal movement of the camera that causes a corresponding instability or shifting in a generated image. Exh. 4 ¶¶ 46-47.

For example, the patent describes that the amount of instability can be represented or measured in number of pixels. Indeed, the patent discloses that a decision circuit 17 “checks the received information for the amount and direction of the image-unstability and converts them into the number of pixels in vertical and horizontal directions” ’729 Patent at 7:14-17; *see also id.* at 7:12-17 (emphasis added). The patent also explains that “[b]ased on the converted pixel numbers, the position of an extracted area (effective pixel area) on the light receiving surface is shifted in a direction that cancels the image-unstability.” *Id.* at 7:18-20 (emphasis added).

A person of ordinary skill would recognize that gyro sensors are used to measure orientation, that is, the relative movement of the device. Exh. 4 ¶ 48. This description of using a gyro sensor to measure image instability would inform a person of ordinary skill that “an amount of image instability” refers to an amount of shift caused by vertical and/or horizontal movement of the electric camera and representable by a number of pixels on the light receiving surface of

the image sensor. *Id.* at ¶ 49. Thus, the claims are not indefinite and should be construed in accordance with this meaning.

- d) “to change a position of the second effective set of pixels according to the amount of image-instability detected by the image-instability detector, in order to correct the image-instability”

Maxell’s Proposed Construction	ZTE’s Proposed Construction
“based on the converted pixel numbers, the position of an extracted area (effective pixel area) on the light receiving surface is shifted”	“Based on the converted pixel numbers, the position of an extracted area (effective pixel area) on the light receiving surface is shifted in a direction that cancels the image-instability”

The dispute concerning this term is whether the language “in a direction that cancels the image-instability” should be part of the construction. ZTE seeks to add this unnecessary language, while Maxell’s construction remains faithful to the term’s plain and ordinary meaning in the context of the specification.

After receiving ZTE’s proposed construction for this term, Maxell offered its current proposal to ZTE in an effort to narrow the number of disputes among the parties. While Maxell maintains that the plain and ordinary meaning for this term should prevail, Maxell will agree to ZTE’s construction so long as the unduly limiting language (“in a direction that cancels the image-instability”) is removed.

This additional language is not warranted. While the language appears in the specification alongside the other language that forms ZTE’s proposed construction, it adds an unnecessary limitation to the claims. ZTE should not be permitted to import this particular embodiment into the claims, and its proposal should be rejected. Indeed, the patent does not equate “correction of image-instability” to “cancellation of image-instability.” For example, an objective of the patent is to “reduce[] image quality degradation” but not necessarily cancel image quality degradation. *See* ’729 Patent at 3:10-15.

Accordingly, ZTE's proposal should be rejected.

- e) "a display unit configured to display an image corresponding to the image signals formed by the signal processing unit"

Maxell's Proposed Construction	ZTE's Proposed Construction
Plain and ordinary meaning	<p>This is a means-plus-function element to be construed in accordance with 35 U.S.C. § 112, ¶ 6.</p> <p><b>Function:</b> "for displaying an image corresponding to the image signals formed by the signal processing unit"</p> <p><b>Structure:</b> "display screen of a television system" (3:22-23) or other screen compatible with NTSC or PAL format (1:35-36; 10:19-21)</p>

The term "display unit" should not be interpreted as an MPF limitation. The mere use of the word *unit* in this term does not, without more, make "display unit" an MPF term. Moreover, this term itself denotes sufficiently definite structure by stating how the "display unit" operates: it displays an image based on corresponding image signals. *See Free Stream Media*, 2017 WL 1165578, at \*25 (declining to construe "client device" as an MPF term because "the claims themselves connote sufficiently definite structure by describing how the 'client device' operates within the claimed invention to achieve its objectives").

The specification further provides additional structural support, thus removing this term from the purview of § 112, ¶ 6. For example, the '729 Patent provides examples of a "display" in the form of a "display screen" (Abstract) and a "television monitor" (1:33-34). Accordingly, as Dr. Madisetti explains, a person of ordinary skill in the art would understand, both from the claim language and from the descriptions in the specification, that "display unit" refers to a definite class of structures, namely, devices that can display images. Exh. 4 ¶¶ 52-54.

Thus, the term "display unit," when coupled with the corresponding descriptions in the specification, denotes sufficiently definite structure, and this term should not be construed as an MPF term. Instead, it should be given its plain and ordinary meaning.

**L. The '193 Patent**

**1. Background of the '193 Patent**

The '193 Patent, which claims priority to November 10, 1998, describes a cellular telephone with an improved means for regulating transmitting power. Cellular telephones operate by transmitting signals through a network to base stations located throughout the country. '193 Patent at 1:11-20. In order to effectively communicate with these base stations, cellular telephones must be capable of varying their transmit power. *Id.* When communications channel conditions of a particular location cause interference or degradation of the transmitted signals, the cellular telephone must be able to adjust its power to ensure transmission of the signals to the base station. *Id.*

Cellular telephones achieve this power adjustment by using a variable amplitude amplifier, which can vary the strength of the signal prior to transmission. *Id.* at 1:24-32. A controller controls the amplification of the variable amplitude amplifier by varying the “gain” of the variable amplitude amplifier through a gain control signal. *Id.* at 1:32-35. The amplified signal then passes through a power amplifier for further amplification before being sent to an antenna for transmission. *Id.* The gain control signal is used by a detector that controls the power amplifier by adjusting a bias condition (sometimes referred to as a “bias voltage”) on the power amplifier. *Id.* at 1:39-44.

Conventional cellular devices prior to the '193 Patent controlled the gain of the variable amplitude amplifier to fall within a range of transmission powers required to reach a particular base station. *Id.* at 1:44-2:6. But an increase in gain and bias condition on the amplifiers would consume more power from the battery in the cellular telephone, thereby degrading the phone's overall battery life and usable time. *Id.* at 2:7-9. The phones therefore had a shorter battery life due to supplying too much power to the amplifiers.



The '193 Patent solved this problem by correlating the gain of the variable amplitude amplifier to the bias condition of the power amplifier. *E.g., id.* at 2:40-44, 6:6-41, FIG. 4. The patent describes using a function to define the relationship between the gain and the bias condition and provides multiple ways to represent the functional relationship between the gain and the bias condition including, for example, using a table of values that correlates these two quantities. *Id.* In this way, a cellular telephone applying the inventions disclosed in the '193 Patent may satisfy the minimum requirements for transmit power while reducing the amount of current required to achieve that power, thereby saving battery life.

## 2. Level of Ordinary Skill in the Art for the '193 Patent

The same as defined above for the '517 Patent. *See* § IV.D.2, *supra*.

## 3. Disputed Terms in the '193 Patent

- a) "A cellular telephone adapted to be used in a CDMA system, comprising"

Maxell's Proposed Construction	ZTE's Proposed Construction
These claims' preambles are not limiting.	Preambles are limiting

The preambles of the '193 Patent's claims should not be limiting. These preambles are not necessary to give "life, meaning, and vitality" to the claims, nor are any of the recitations in these preambles ("cellular telephone" and "CDMA system") referred to in the body of the claims. *See Catalina Mktg. Int'l, Inc. v. Coolsavings.com, Inc.*, 289 F.3d 801, 808 (Fed. Cir. 2002) (quoting *Pitney Bowes, Inc. v. Hewlett-Packard Co.*, 182 F.3d 1298, 1305 (Fed. Cir. 1999)). Rather, the claims themselves define a structurally complete invention, thereby making these preambles not limiting. *See id.* (citing *Rowe v. Dror*, 112 F.3d 473, 478 (Fed. Cir. 1997)).

Nor is there any basis in the '193 Patent's specification or prosecution history for adding the preambles to the claims' limitations, as ZTE proposes. For example, the January 2, 2002

Response in the '193 Patent's prosecution history does not limit the claims to the recitations in the preambles. In this response, the applicant distinguished the '193 Patent's claims based on the claim limitations themselves, not the preambles. *See* Jan. 2, 2002 Resp. at 8-9. Accordingly, the preambles of claims 1 and 7 of the '193 Patent are not limiting.

b) “variable amplitude amplifier”

Maxell's Proposed Construction	ZTE's Proposed Construction
Plain and ordinary meaning	“device that includes a first-stage amplifier, two filters, an up-converter, and a second-stage amplifier”

Here, ZTE attempts to unduly narrow the scope of the claims by attempting to limit the claims to a single disclosed embodiment while excluding another disclosed embodiment. ZTE points to an embodiment of the claimed “variable amplitude amplifier” (*e.g.*, amplifier 230 in Fig. 1) and excludes the preferred embodiment of a variable amplifier disclosed in Figure 3 of the specification. Figure 1 discloses an embodiment of a variable amplitude amplifier 230 that consists of two stages of amplification formed by amplifiers 232 and 234. *See* '193 Patent at 5:19-21, 5:31-33, 5:40-45. However, the preferred embodiment of a variable amplitude amplifier disclosed in Figure 3 consists of a single stage of amplification formed by a single amplifying element, transistor Q31. Indeed, “[i]n this embodiment, a transistor is employed as an amplifying element Q31.” *Id.* at 6:56-57 (emphasis added).

But limiting a claim term to a single embodiment, as ZTE attempts to do here, violates a fundamental principle of claim construction. *See Comark Commc'ns, Inc. v. Harris Corp.*, 156 F.3d 1182, 1187 (Fed. Cir. 1998). Indeed, the '193 Patent's specification itself expressly teaches that “reasonable variations and modifications are possible in the component parts” of the invention. '193 Patent at 10:52-54. Thus, ZTE's impermissibly narrow proposal should be rejected. *See Koninklijke*, 2017 WL 2957927, at \*7 n.33 (declining to adopt a construction that

added a limitation to the claims in part because “the specification provides that ‘various changes and modifications can be made’ to the preferred embodiment...”).

Instead, this term should be given its plain and ordinary meaning. The term “variable amplitude amplifier” would be readily understood by a person of ordinary skill in the art. Caloyannides Decl. (“Exh. 3”) ¶¶ 48-50. Thus, no specific construction is necessary. *See i2 Techs., Inc. v. Oracle Corp.*, 2011 WL 209692, at \*4 (E.D. Tex. Jan. 21, 2011) (“The plain language of the term is understandable; therefore, [the terms] do not require construction.”).

## **M. The ’794 Patent**

### **1. Background of the ’794 Patent**

The ’794 Patent, which has a priority date of May 22, 2000, solves a problem that existed in power management for conventional information processing devices. Specifically, prior to the inventions disclosed in the ’794 Patent, conventional information processing devices would attempt to increase power efficiency by, for example, reducing power consumption of function devices (*e.g.*, application) that performed the functions of the information processing device or stopping or restricting operations of unused function devices. ’794 Patent at 1:12-22.

But these conventional devices could not prioritize one function over another; either all function devices had their power restricted, or none did. *Id.* at 1:23-31. For example, in an information processing device containing an audio communication function and a videophone function, a user may wish to prioritize the audio communication function over the videophone function, so that the user could continue an audio call even after the battery is too depleted to effectively use the videophone function. *Id.* at 1:31-41. However, conventional devices made no allowances for a user’s priority. *Id.* Instead, conventional information processing devices would continue operation of all functions, to the point where higher priority functions lose power at the same time as lower priority functions. *Id.*

The '794 Patent solves this problem by assigning different priorities to the function devices of an information processing device. *Id.* at 1:49-67. The patent describes a controller that controls the operation of the function devices based on remaining battery capacity. *Id.* at 1:55-67, 4:36-61. The controller also sends power reduction instructions to different function devices at different times. *Id.* at 4:36-61. The effect is that lower-priority function devices (such as a videophone function) can be powered down before other, higher-priority function devices (such as audio communication). This priority-based power management allows users to manage power more effectively, and to continue using desired functions longer by reducing power to lower-priority functions earlier. *Id.* at 1:55-67.

## 2. Level of Ordinary Skill in the Art for the '794 Patent

The same as defined above for the '443 Patent. *See* § IV.A.2, *supra*.

## 3. Disputed Term in the '794 Patent

“function device(s)” / “component device” / “component devices for performing different functions in the device”

Maxell's Proposed Construction	ZTE's Proposed Construction
“hardware, software, or a combination of the two that consumes power and implements one or more functions of the information processing device”	<p>Indefinite</p> <p>This is a means-plus-function element to be construed in accordance with 35 U.S.C. § 112, ¶ 6.</p> <p><b>Function:</b> “modem functions” (1:20); “audio communication function (function device A) and a videophone function (function device B)” (1:31-32); no function otherwise disclosed</p> <p><b>Structure:</b> insufficient corresponding structure disclosed</p>

The parties agree that “function device” and “component device” should have the same meaning but disagree on what that meaning should be. Maxell proposes a construction that embraces both the plain meaning and the way in which these terms are used in the claims and described in the specification: “hardware, software, or a combination of the two that consumes power and implements one or more functions of the information processing device.”

The inventors of the '794 Patent use their own terminology to refer to hardware/software components that perform specific functions in the information processing device: “function device” and “component device.” Indeed, the patent specifically refers to “an audio communication function” as “function device A” and to “a videophone function” as “function device B.” '794 Patent at 1:31-32. Moreover, the claims themselves describe these terms as being “equipped with independent functions” (in the case of function devices) and as “performing different functions in the device” (in the case of component devices). Thus, the “function” devices are simply hardware/software portions of the information processing device that perform one or more functions.

The patent generally describes “function” or “component” devices as providing the standard functions or operations of the information processing device, as evident from the claims themselves and the exemplary functions mentioned throughout the specification. *See, e.g., id.* at 6:15-18 (“The devices specific to the functions 1, 2 are provided through the function devices 1, 2....”). For example, the '794 Patent describes “modem functions,” and exemplary “common” function devices such as a CPU and memory. *Id.* at 1:19-20, 1:32-33, 6:14-15. The modem, CPU, and memory are specific, definite exemplary structures that perform functions in the information processing device.

The specification explains that each function device can perform a single function, or a function device can perform multiple functions. *Id.* at 2:33-35. And, as the claim language plainly requires, these function devices must receive power. *See, e.g., id.* at cl. 1 (“a power supply circuit for supplying power to each of said function devices...”) (emphasis added).

The inventors of the '794 Patent did not intend to restrict the “function” or “component” devices to any particular function, and they deliberately chose to use broad language in the

claims and the specification to capture this concept. There is no support for ZTE's attempt to frustrate that intention by limiting the claim terms to select embodiments.

Restricting these claim terms to a portion of the preferred embodiments unduly narrows the scope of the term. *See Comark Commc'ns*, 156 F.3d at 1187. Indeed, ZTE has ignored other exemplary function devices in the form of a CPU and memory. *See '794 Patent* at 6:14-15. ZTE's attempt to selectively restrict these terms to certain embodiments, to the exclusion of others, is reason enough to reject ZTE's narrow interpretation.

Nor should these terms be construed according to § 112, ¶ 6, as ZTE proposes. First, the terms "function device" and "component device" do not follow the traditional MPF format. Second, neither of these terms recites a function at all. ZTE itself highlights this shortcoming by conjuring a function, not from the claims, but from exemplary embodiments in the specification. *See Joint Claim Construction and Prehearing Stmt.* at 55 (alleging that the "function" for these terms is "'modem functions' (1:20); 'audio communication function (function device A) and a videophone function (function device B)' (1:31-32); no function otherwise disclosed") (emphasis added).

But the function for an MPF claim should come from the claims, not from the specification, as ZTE has done. *See Wenger Mfg., Inc., v. Coating Mach. Sys., Inc.*, 239 F.3d 1225, 1233 (Fed. Cir. 2001) ("Under § 112, ¶ 6, a court may not import functional limitations that are not recited in the claim..."); *Mass Engineered Design, Inc. v. Ergotron, Inc.*, 559 F. Supp. 2d 740, 747-48 (E.D. Tex. 2008) ("Defendants insert limitations not cited in the claim, which is improper."). This alone is reason enough to reject ZTE's proposal.

Simply using the word *device* in a claim limitation is not sufficient on its own to invoke § 112, ¶ 6. “Function device” and “component device” are not MPF terms, ZTE’s impermissibly narrow construction should be rejected, and these terms should be construed as Maxell proposes.

#### N. The ’695 Patent

##### 1. Background of the ’695 Patent

The ’695 Patent, which claims priority to November 4, 1998, shares a specification with the ’491 Patent. Like the ’491 Patent, it describes an audio decoder apparatus that can process audio signals of numerous formats, without requiring large circuitry to store each type of program code. The ’695 Patent, however, also describes downloading a decoding program code from outside of a memory. The decoding program is used to provide another method of compression and encoding.

##### 2. Level of Ordinary Skill in the Art for the ’695 Patent

The same as defined above for the ’491 Patent. *See* § IV.I.2, *supra*.

##### 3. Disputed Term in the ’695 Patent

“a controller for receiving a method of compression and encoding from said demultiplexer . . .”

Maxell’s Proposed Construction	ZTE’s Proposed Construction
Not a means-plus-function term; plain and ordinary meaning.	<p>This is a means-plus-function element to be construed in accordance with 35 U.S.C. § 112, ¶ 6.</p> <p><b>Function:</b> “for receiving a method of compression and encoding from said demultiplexer, for detecting whether said method of compression and encoding changes to another method of compression and encoding or not, and if said method of compression and encoding changes, for downloading the decoding program code corresponding to said another method of compression and encoding to said memory from outside said memory”</p> <p><b>Structure:</b> an external CPU (FIG 1) connected via a bus between a read only memory and the memory, running the algorithm of Figs. 4 and 5. (6:30–7:54)</p>

“Controller” should not be interpreted as an MPF term at least because the term itself connotes sufficient structure to a person of ordinary skill in the art. Indeed, the IBM Dictionary

of technical terms defines “controller” as “[a] device that coordinates and controls the operation of one or more input/output devices, such as workstations, and synchronizes the operation of such devices with the operation of the system as a whole.” IBM Dictionary of Computing (1994 ed.) (Exh. 5) at 145.

This Court would not be the first to hold that “controller” denotes sufficiently definite structure. *E.g.*, *Sound View Innovations, LLC v. Facebook, Inc.*, 2017 WL 222177, at \*5 (D. Del. May 19, 2017) (“‘Controller’ may be a class of structures, rather than one specific structure, and may be defined with functional terms, but that does not make it means-plus-function.”); *see also Honeywell Int’l Inc. v. Universal Avionics Sys. Corp.*, 264 F. Supp. 2d 135 (D. Del. 2003) (“controller” is not an MPF term).

Indeed, this Court has determined that “controller” denotes sufficiently definite structure to avoid § 112, ¶ 6. *E.g.*, *911EP v. Whelen Eng’g Co., Inc.*, 512 F. Supp. 2d 713, 727 (E.D. Tex. 2007) (“The claim language does not merely describe a controller, but adds further structure by describing the operation of the controller. ... Accordingly, the description of the operation of a controller is sufficient to avoid section 112 P 6.”); *see also SynQor, Inc. v. Artesyn Techs., Inc.*, 2010 WL 2991037, at \*23 (E.D. Tex. Jul. 26, 2010), *aff’d*, 709 F.3d 1365 (Fed. Cir. 2013) (finding that “control circuitry determining ...” is not an MPF term).

In addition, ZTE’s corresponding structure is unduly narrow. As with the “controller means” term in the ’491 Patent, ZTE is simply seeking to limit the scope of the claims to a preferred embodiment.

Moreover, ZTE’s construction sits in uneasy tension with the natural language of the claim itself. The claims are directed to a “multiplexed audio data decoder apparatus” that “comprises” (in other words, includes) the “controller.” Yet ZTE would twist this plain language



to require that the “controller” is nevertheless “external” to the decoder apparatus. This nonsensical result defies the claim language itself and therefore cannot be correct.

## **V. NONE OF THE ASSERTED CLAIMS ARE INDEFINITE**

In addition to the disputed terms identified in Section III.A, Defendants have also alleged that a number of claim terms are indefinite. These terms include:

- “selection switching determination unit for selecting one from said first and second physical interfaces to switch to a selected physical interface” and similar terms (’517 Patent);
- “a storage unit in which group information generated by classifying the plurality of base stations into groups” (’139 Patent, Claim 11);
- “a relation of said direction and a direction from said present place to said destination” (’317 Patent, Claims 1 and 10);
- “said device connected to said server outputting said location information and said direction information and receiving retrieved information based on said outputted information at said server” (’317 Patent, Claim 6); and
- “a signal processing unit configured to form image signals” (’729 Patent, Claim 1).

None of these terms are indefinite, and each term should instead be given its plain and ordinary meaning to a person of ordinary skill in the art at the time of the invention. Defendants have not yet provided detailed descriptions for these invalidity theories. Maxell reserves the right to respond more fully to Defendants’ indefiniteness assertions upon receiving Defendants’ brief on indefiniteness.

Dated: October 2, 2017

*/s/ Jamie B. Beaber*

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**CERTIFICATE OF SERVICE**

I hereby certify that all counsel of record who are deemed to have consented to electronic service are being served this 2nd day of October, 2017, with a copy of this document via the Court's CM/ECF system.

/s/ Jamie B. Beaber  
Jamie B. Beaber